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## GREEK LIGHT ON WORLD HISTORY

### *Approach.*

The subject of this talk<sup>1</sup> is in one sense a rather personal one. I am venturing to say something about my own approach to History. I had the good fortune to be born just not too late to come in for the old-fashioned 'Early Modern Western' education in the Greek and Latin languages and literatures; the first grown-up job that I did was to teach Greek and Roman history for the School of *Litterae Humaniores* at Oxford; and, in afterwards exploring other provinces of history, I have always found my way into them through a Greek gate. Greek history has been, for me, the key to world history.

My use of this particular key is, of course, a consequence of my having lived and worked in a particular time and place. If I had happened to be born in China at any date within a span of twenty centuries ending on my own birthday in A.D. 1889, I should have entered the same field of historical study through another gate which would have shown me the same landscape in a different perspective. All human views of history are partial and relative, and it is, I believe, important for a historian to keep himself always alertly aware of what his own bias is, because that is his only chance of being able to correct it, or at least to allow for it and to put his hearers and readers on their guard against it. In speaking and writing for my fellow members of an Archaeological School at Athens and a Society for the Promotion of Hellenic Studies, I know that I need not apologise for my partiality towards Hellenism, because I find myself in the reassuring company of people whose special approach to the study of human affairs has been the same as mine. All the more, though, on that account, we Hellenists, when we meet together, shall do well to remind ourselves that our Greek angle of vision is not the only one open to a historian, though there are good grounds for thinking that this approach is at least as good as any other. No doubt, I am here preaching to the converted. All the same, I am going to run over some of these grounds, as I have seen them in my own personal experience.

### *Stimuli.*

I will start by making the obvious point that a historian cannot visit Greece without having his historical horizon extended in all directions and his

<sup>1</sup> The paper here printed is based on a talk given at an open meeting of the British School at Athens in December 1948, and repeated in London in February

1950 at a general meeting of the Society for the Promotion of Hellenic Studies.

zest for studying history stimulated to a corresponding degree. In my own case, I have never ceased to draw stimulus and sustenance from the experience of spending ten months in Greece as a student at our School at Athens in 1911-1912. This first sight of Greece was the climax of an intensive education in the Ancient Greek language and literature and history; and my purpose in visiting Greece at the end of this twelve-years-long probation was to equip myself for teaching Ancient Greek history at Oxford—for the rest of my working life, as far as I then could foresee. While the sight of Greece at first hand did, of course, illuminate my understanding of Ancient Greek history, its dominant and overwhelming effect was to open up to me, through this Greek door, vistas of a host of other historical episodes, ranging in time from the recently disinterred civilisations of the first known generation of this species of society to the current international politics of a world in which I myself had, by then, been living for nearly twenty-three years without ever being more than dimly aware of the sinister rumblings of this live volcano. I went to Greece in danger of becoming imprisoned in the study of Ancient Greek history alone; I left Greece with my imagination awakened to the possibility of studying History as a whole.

Let me illustrate what happened to me by recalling some incidents of my first visit to Crete in March 1912.

There was a party of us from the British and American Archaeological Schools at Athens, travelling together (I was lucky enough to find myself in the company, among others, of Professor Gulick of Harvard, the editor of *Athenaeus*, and Mrs Hasluck, who was then still Sir William Ramsay's promising young student, Miss Hardy). The object of our journey was to see the Minoan sites at Knossos and Phaistos, but the voyage from Athens to Canea on 9th March, 1912, plunged us into militant international politics which were to affect our countries and ourselves in an intimate way of which we then had no idea—though by that time an oncoming First World War was little more than twenty-eight months' distance off.

Our fellow-passengers were Cretan deputies irregularly elected to the Parliament at Athens as a demonstration of the Cretan Greek Orthodox Christians' eager desire to exchange the autonomy under Ottoman suzerainty, which had been the status of Crete since 1897, for a political union of their island with the Kingdom of Greece. The Cretan unionists had hoped to create a *fait accompli* at Athens, because they had reckoned that their fellow-islander Eleftherios Venezelos, who, in the previous elections in Greece, had been returned triumphantly to power, would not have the heart to turn his fellow-Cretans away; but they had under-estimated Venezelos' force of character. The hour for the Balkan League's assault on Turkey had not yet

quite struck, and Venezelos had no intention of letting his hand be forced prematurely; so he had sent the would-be Cretan deputies back home from the quay-side without giving them a chance to implicate him in a premature breach of existing international treaties. Our academic ignorance of what had just been going on at Athens under our noses was enlightened for us by Bouchier, the Balkan correspondent of *The Times*, who was also on board *en route* for Canea in order to take a peep into the simmering pot of Cretan politics. As I afterwards realised in retrospect, we were watching here one phase of a political metamorphosis which was converting a geographically scattered but nevertheless corporately autonomous Ottoman ecclesiastical community, the *Millet-i-Rûm*, which had been intermingled with other communities of the kind all over the Ottoman World, into a local Greek successor-state of the Ottoman Empire. This transformation had begun in 1821 and was to be completed in 1922, and we were witnessing one of the rare incidents in its terrible history that was a comedy and not a tragedy. I was soon to see the tragic side; but, when, after touching at Canea, we landed at Candia, our attention switched away from both current politics and Minoan archaeology under the overwhelming impression made on us by the massive Venetian ramparts, gates and galley houses of a fortress-city which had stood the twenty-four years' siege of 1645-1669. That authentic tale of years made the legendary ten-years-long siege of Troy seem short; yet the Venetian Empire was, I believe, for all of us classical Greek scholars in that party, a new star in our historical firmament. Ever since that moment, this Venetian star has shone brightly for me.

After we had duly set eyes on another new world at Knossos and Phaistós, the rest of our party rode back to Candia to embark for the Peiræus, while I set off walking eastwards through the Mesará. On my first day's solitary journey, I fell in with an old man driving a couple of mules laden with wine skins. My new companion showed himself benign to man and beast—giving me lifts on the animal which he was not riding himself, but always taking care that we should dismount when the track went down hill, in order to spare the beloved creatures' legs. Travelling in this way through the great trough and casting my eyes along the range of mountains on our right, which hid the Libyan sea, in order to locate, if I could, the point behind which I should have been able to look down on Saint Paul's 'Fair Havens' if I had had some spare hours for making the detour, I noticed for the first time that the plain, though apparently fertile, was lying fallow, and that the villages along the foothills looked as if they were deserted. 'Wasn't there ever anybody here?' I asked my kindly guide, and then suddenly the old man's face lit up. 'ἦτανε,' he answered me, 'ἦτανε Τοῦρκοι ἦτανε μὰ στὰ ἐνῆματα ἐπὶ τὰ



τοὺς ἀκόφωμεν ὅλους—ἄντρες, γυναῖκες, παῖδιά—ὅλα τὰ, ('Oh! There were, there were; they were Muslims; but in ninety-seven we cut their throats—all of them; men, women and children; the whole lot'); and his benevolent face beamed with satisfaction at this blissful reminiscence as he illustrated his words with the gruesomely expressive gesture of drawing his hand across his throat. I have never forgotten the shattering impression made on me in that instant by those ghastly words uttered in all innocence by a human soul wearing that benignant countenance, and the historical lessons of the experience have broadened and deepened for me as I have gone on living through an inhuman age of which I had no foreboding in 1912.

My immediate lesson at the time was an inkling of the tragic side of the metamorphosis of a *Millet-i-Rûm* into a Greek national state—though I did not realise this fully till I had seen something, at first hand, of the Graeco-Turkish war of 1919-1922 and had been able, in this perspective, to fit the Cretan massacres of 1897 into their place in a series which ended in Anatolia in 1922 and had begun in the Morea in 1821. This tragic history of the introduction into the Ottoman World of the exotic Western institution of the territorially compact and homogeneous sovereign national state, in place of the territorially scattered yet communally autonomous *millet*, led me eventually to perceive one of the social laws operative in all encounters between societies with diverse cultural heritages. 'What is one man's meat is another man's poison.' An institution which may have been comparatively innocuous in its original setting, where it was a solution for local problems that was in conformity with local conditions, might work havoc when exported to another world where the local conditions were out of harmony with it—as the territorially intermingled autonomous ecclesiastical communities of the Ottoman World were out of harmony with the exotic Western institution of the national state until the discord was forcibly resolved by a process of reciprocal massacre and eviction that took a hundred years to work itself out.

The deeper lesson of my experience with the old Cretan muleteer was a revelation of the incongruity of human nature and the persistence of Original Sin beneath the crust of Civilisation. My conclusion at the moment was that Near Eastern Man must be an invincibly savage breed if he had profited no more than this from his proximity to that enlightened Western Christendom that was my own native world, and I was tempted to thank God that we Western Christians were not as other men were. It was not till the German Army had committed its atrocities in Belgium in 1914, and the 'Black-and-Tans' theirs in Ireland in 1919, that I came to understand that the moral abyss which had opened at my feet in the Cretan Mesará on that 14th day of March, 1912, was an enormity, not just of Near Eastern human nature, but of

human nature *sans phrase*, and that the incongruity between the Cretan Christian's mercilessness towards his Muslim fellow-countrymen (the Cretan Turks had been converts who had never lost their Greek mother-tongue) and the same old man's benevolence towards his mules and me was not just a Near Eastern idiosyncrasy but was characteristic of *Homo Occidentalis* likewise, because it was one of the universal traits of human nature.

My next lesson in history in the course of that journey in Crete came to me a day or two later when, after I had parted with my dear old murderous muleteer and had reached the south-east corner of the island, I rounded the spur of a mountain and suddenly found myself confronted with the ruins of a seventeenth-century country house such as I had often seen at home in England—except that this baroque villa at the east end of Crete was deserted and in ruins. To-day we should pass a bombed-out seventeenth-century house on English ground without being pulled up short by so unsensational a sight; but in 1912 the only ancient ruins in England that were familiar to English eyes were those of the mediaeval monasteries at whose expense our Early Modern country houses had been built. In England in 1912, a house like that would have been still inhabited and, as likely as not, continuously inhabited by the descendants of the man who had built it—whereas this house of the same age and architecture in Crete was as dead and done with in 1912 as Minoan Knossos. This must have been the country house of some Venetian contemporary of John Evelyn. The two men might have met at Padua before the Venetian was posted to the colonial administration in Crete in the last days before the outbreak of the Turco-Venetian War of Candia which ended in the Venetians' losing the island.

By that time I had picked up enough of the history of the Venetian Empire in the Levant to make out that the Venetian regime in Crete had lasted, from beginning to end, for something like 460 years; and it flashed into my mind that in that year 1912 there was no British colony that had been under British rule for so long a span of time as that. After enduring for not much less than half a millennium, Venetian rule in Crete had passed away as though it had never been, and, in passing, had left, in that ruined baroque country-house, a memorial proclaiming that Modern Western colonial empires were no more exempt from mortality than the *Pax Romana* or the 'thalassocracy' of Minos. The brilliant star of Venice now began to glare at me with a baleful light.

Taking ship, at the end of my Cretan expedition, from Rethymno, and coasting eastwards towards Candia on a fine starry night, before making northward across the Aegean for Peiraeus, I was lying on a coil of rope in the bows and singing *Domum* when, looking up, I saw an elderly man smiling down at me and asking me what my Latin song was. My fellow-traveller

turned out to be the celebrated German epigraphist Fabricius who, twenty-eight years back, in 1884, had disinterred the great inscription recording the Laws of Gortyn. He was re-visiting Crete for the first time since then, to have another look at the site of the Hellenic Cretan city where he had made his magnificent discovery and to set eyes for the first time on a Minoan World which Sir Arthur Evans had disinterred since then. Before landing at Candia he tore a leaf out of his diary and wrote his name on it for me. I have this treasured scrap of paper still, and visualise the signature whenever I am tempted to feel that Germans guilty of atrocities are inhuman mainly on account of their being Germans, and not mainly on account of their being human beings.

The Gortyn Inscription was a reminder to me that, in the long and chequered history of Crete, there had been an Hellenic chapter as well as, among others, a Venetian and a Minoan one; but the last stage in my return-journey to Athens led me away again into other worlds; for, between Candia and Peiraeus, my travelling companions were a Sphakiot and an Assyrian. In the Sphakiot I was meeting in the flesh a representative of a then fast dwindling rearguard of an innocently primitive barbarism (the vanguard of the hosts of a neobarbarism in the heart of Western Christendom had not yet shown its sinister face). In the Assyrian I was meeting in the flesh a representative of a now all but submerged Far Eastern Christendom which in the seventh century had extended right across the Continent from Persia to China, and had survived into the thirteenth century to provide civil servants for Mongol conquerors of all but the southern and western fringes of the Old World. In 1912 the Nestorian Christian community was still extant in its original domain in a fastness among the Hakkiyari mountains in Kurdistan (these Nestorians in the Zagros were evicted during the War of 1914-18, and in 1949 I visited the reigning Mar Shimun in Chicago, which in the meanwhile had become the seat of the Nestorian Church's oecumenical government). My Nestorian travelling-companion on the voyage from Candia to Peiraeus was an itinerant collector of alms who displayed his financial ability—to the Sphakiot's astonishment as well as mine—by entering into a bargaining-match with the Greek ship's purser and wheedling out of him a substantial reduction on the standard third-class fare which the Sphakiot could never have obtained by his melodramatic swash-buckling airs.

These two new worlds of Sphakiá and Hakkiyari engrossed my attention till the moment when, as we steamed into Peiraeus harbour, I found myself rising from table, in the first-class saloon, in the company of two Greek girls and a German professor. 'Ζήτω ἡ Κρήνη,' cried the girls in high spirits, as we glided through the harbour mouth; and 'Ζήτω ἡ Μεσσοβία,' they added in

their exuberance as we stood in towards our anchorage. 'Αὐτὸ θεὶ εἶναι πλεὸ δύσκολο' ('That will not be so easy') said the sober-minded professor with an indulgent smile—not dreaming, any more than I did, on 31st March, 1912, that the Balkan War was then already hatching, and that this invisibly approaching war in the Balkans was to be the prelude to a world war in which the professor's country and my own would soon be fighting on opposite sides. Still, the Greek girls' light-hearted speculations at lunch-time as to whether war would break out this spring or next spring (it actually broke out that autumn) had given me a slight feeling of uneasiness, for they had discussed the date of this contingency with the gusto that politically-minded people at home in England would have shown in airing their guesses about the date of a general election which might be expected to bring their own party into power; and I found myself piecing these Greek girls' conversation together with the talk that I had been hearing in village cafés in the Morea about something called 'the foreign policy of Sir Edward Grey', which I had never heard talk of in Oxford.

Well, you see, one three weeks' journey to and from one Greek island in 1912 put considerable tracts of World History on to my mental map for me.

#### *Recurrences.*

On my next expedition from Athens after my visit to Crete I learnt some further historical lessons from a peregrination of Laconia, on which I was then setting foot for the first time.

Upon reaching Sparta from the coast of the Gulf of Nauplia by a track across Parnôn which had led me past the battlefield of Sellasia down a valley filled with judas trees in blossom, my first acts were to spend one afternoon sitting on the bluffs crowned by the Menelaïon, on the left bank of the Eurotas immediately opposite the town, to gaze across the vale at the citadel of Mistrà on an outlying spur of Mount Taygetus, and another afternoon sitting on the peak of Mistrà to gaze back at the Menelaïon and the mountains piled behind it up to the skyline of Parnôn. As I let my eyes drink in these two complementary views of the magnificent Laconian landscape, and at the same time let my mind run back over the course of Laconian history, it was borne in upon my understanding that I was not merely looking at a single landscape from two different angles of vision, but was witnessing a single episode of history in two performances which were presentations of an identical drama in spite of their being separated from one another in the space-dimension by an interval of five miles as the crow flies, and in the time-dimension by an interval of three thousand years as the chronologist reckons.

To a meditative historian's eye, Mistrà and Therapne were one fortress

visible in two avatars, and the identity of the single episode of history in which they had both played the same leading rôle was not impaired by the circumstance that on different occasions the same *dramatis personae* had been impersonated by different casts of actors. The plot of this identical play had been the occupation of Continental European Greece by invaders from overseas who had managed to seize, fortify and hold the main natural fortresses, cultivable patches of lowland and inter-connecting passes, but had found it beyond their strength to subdue the surrounding highlands or to establish an effective frontier against a menacing continental hinterland. Menelaus in his castle at Therapne on the bluffs had been reincarnate in the last, or last but one, of the Turkish voyevodes who had ruled the same Laconia from the summit of Misthrà below Taygetus; and our ampler acquaintance with the play as it had been performed during the six centuries ending in A.D. 1821 could be applied legitimately to an elucidation of the more scantily documented previous performance which had come to the same abrupt and tragic *dénouement* in some early year of the twelfth century B.C. (When I was working out for myself these implications of the phenomenon of recurrences, I was unaware that I had been anticipated by an eighteenth-century Neapolitan historian-philosopher named Vico.)

In the Laconian case the intellectual manoeuvre of historical reconstruction is invaluable, because Misthrà—standing, as it still stands, untouched since the morrow of its sack by my Sphakiot's Maniot cousins in the first week of April, 1821—is a veritable museum, as will be testified by any archaeologist who has ever visited this site, in which the strata mount towards Heaven like the zones of Dante's Earthly Paradise, instead of descending into the pit of a forum or an agora. In the *Chronicle of the Morea*, lines 2985–3007, we have an account of the selection of the site and the building of the fortress in 1248 by Prince William II Villehardouin with an eye to commanding the Langádhia Pass between the vales of Laconia and Messenia, and at the same time containing the Melingian tribe of Slav wild highlanders in the Southern Taygetus; and we can follow the vicissitudes of fortune through which the original Western Christian French founders of the Principality of Achaia were progressively evicted by Orthodox Christian Greek princes of an expiring East Roman Empire, and these East Roman Greeks, in their turn, by Muslim Ottoman Turks who remained in possession till the final catastrophe in 1821. The shells of the contemporary castles in Central Greece were occupied in succession by an even more picturesquely motley series of hermit crabs: Burgundian knights ousted by Catalan soldiers of fortune who were ousted in their turn by Florentine bankers who were snuffed out at last by Ottoman empire-builders. In the light of this analogy, the series of Minoan.

Cretan, Achaean Greek, Mycenaean and Anatolian Pelopid masters of Mithrā's double, Therapne, springs into focus out of the mist of legend, and an incident in the history of Frankish Achaia elucidates a passage in the *Odyssey* (IV, 168-180) in which we hear Menelaus telling Telemachus how he would have invited Odysseus, had Odysseus made his way safely back home from Troy, to reinforce the Pelopid 'Ascendancy' in the Morea, with his henchmen, in a fief which Menelaus would have provided for him there by sacking one of the still unsubdued native strongholds within the bounds of Menelaus's own barony. This Homeric strophe has its antistrophe in the *Chronicle of the Morea* (lines 1847-1872) in the account there of Prince William de Champlitte's investment of Geoffrey de Villehardouin with the fief of Kalamáta and Arkadhiá, as a reward for Geoffrey's having parted company with his Frankish fellow-conquerors of Constantinople and Salonica in order to throw in his lot with the Frankish adventurers in the Morea. The boundaries of Geoffrey's fief included the seven castles with which Agamemnon offered to invest Achilles (*Iliad* IX, 149-153) when the Moreot Achaean prince was begging the sulking Rumeliot Achaean hero to take up arms again to save Achaean besiegers of Troy who were in danger of being driven into the sea by a dashing sortie of the beleaguered Trojan forces.

The recurrence that caught Vico's eye, as he surveyed the World and its history from his Neapolitan vantage-point within the limits of what had once been the Hellenic World, was the still more significant correspondence between the Homeric heroic age and another age of the same character by which the history of a Western Christian World had been inaugurated after the fall of the Roman Empire. Vico's identification of these two heroic ages with one another is of paramount importance for an understanding of the morphology of history, because its necessary corollary is the proposition that the ensuing histories of a post-Homeric Hellenic Civilisation and a post-Nibelung Western Christian Civilisation are in some sense parallel and contemporary, in spite of their being strung at such widely different points on the chronologist's fine-drawn thread. I discovered their contemporaneity for myself by the aid of a different clue when the outbreak of the First World War caught me teaching Ancient Greek history at Oxford; for the experience of a war in which the spiritual as well as the political destinies of Western Christendom were manifestly at stake brought to life for me the sense and feel of phrases and passages in the work of Thucydides which I had read hitherto with blind eyes because, so far, I had not been in possession of the psychological key to them. I realised in 1914 that the experience which was overtaking my generation now in the course of Western history had overtaken Thucydides' generation in the course of Hellenic history by the time at which he wrote his

book. In other words, the age of Thucydides, so far from lying behind me in my past, had been standing all that time in front of me in my future until now, when I was just beginning to catch Thucydides up through meeting in my own life with Thucydides' experiences. The chronologist's clock-time reckoning of historical priority and posteriority had thus proved to be not only relatively unimportant but even positively misleading in so far as it had overlaid and obscured another reckoning in the altogether different medium of psychological experience. This psychological calculus brought to light the truth that, in terms of experience, the histories of Hellas and Western Christendom were not successive but were contemporary, and that in the already completed course of Hellenic history there were experiences, accessible to us in the records of them, which in our own history were unknown and still intrinsically unknowable because, in our history, these experiences were still awaiting conception in the womb of the future.

#### *Units.*

This psychological contemporaneity of Hellenic and Western Christian history had a morphological implication. The two objects of historical study that had thus proved to be psychologically contemporary with one another must be deemed, by the same token, to be also morphologically equivalent to one another in some sense, and this conclusion might perhaps enable Modern Western Hellenists to re-apprehend an optimum unit of historical study which appeared to have eluded the grasp of many Modern Western students of the history of our own Western affairs.

Since the rejection, by Late Modern Western minds, of a providential vision of history which had been inherited from the Jews by the Christians and the Muslims and had found its classical expositions in Saint Augustine's *De Civitate Dei*, Ibn Khaldun's *Prolegomena*, and Bossuet's *Discours sur l'Histoire Universelle*, these latter-day Western intellectual revolutionaries had been attempting to attack the problem of History from a new angle by falling upon the official documents which, in a pre-atomic age of Western history, had been accumulating in enormous quantities in the record offices of several dozen parochial Western states. Those of us who have been lucky enough, in our generation, to have still received our historical education in the field of Hellenic history, instead of falling into the toils of Mediaeval and Modern Western documentary research, have realised, of course, that this newfangled approach to History is inferior to our own traditional approach in more than one respect; and it is indeed doubly and trebly misleading; for it distorts the truth of history by offering us an unintelligibly fragmentary view of history in three dimensions of historical reality. In the space-dimension, it diverts

our attention from Western Christendom as a whole to one or other of the local states into which the life of this society has come to be articulated on the political plane of activity. In the time-dimension it invites us to study an uncompleted span of experience with a latter limit which is arbitrarily set by the irrelevant accident of the date at which the historian happens to find himself living at the moment when he is doing his work—since the history of a society of which the historian himself is a member must *ex hypothesi* be the history of an experience which is still continuing. In the third place this history that is culled from documents silting up in parochial Western public record offices cannot give us that view of life as a whole which is the only view that offers an insight into the living reality; for a political excerpt from real life, within spatial limits that are parochial and within temporal limits that are bounded by an ambulatory iron curtain called the present moment, is so hideously mutilated a fragment of reality that it is hardly recognisable as being even a gobbet of the butchered human form divine.

At the risk of lapsing into Pharisaism, we Hellenists may be tempted, as we shudder at the archivist historians' plight, to congratulate ourselves on our good fortune in having been inducted into an approach to History that gives us at least some chance of seeing life steadily and seeing it whole. Thanks to Hellenic history's being dead and done with from the misleadingly restricted point of view of a living Western observer wearing the man of action's intellectual blinkers, the diverse activities of life are now visible to us, in Hellenic history, in their true proportions. Politics and economics, which always tend to overshadow the spiritually more important pursuits of Mankind in the practical man's estimation in the passing moment, have dwindled to their just measure of insignificance in our latter-day Western view of an Hellenic history that has no practical bearing on our own present fortunes. A modern Western student of Mankind's Hellenic experience could not easily fall into the error of taking Greek politics and economics more seriously than Greek art, poetry and philosophy. In our Early Modern classical education we approach our study of Greek history along the auspicious avenue of a study of Greek language and literature; and in this context we are aware that, in a totality which is the reality of life, the intellectual, the artistic and perhaps, above all, the religious activities of Man are those which count for most on the long and dispassionate view for which Greek philosophers have coined the name *θεωρία*.

#### *Breakdowns.*

If this Hellenic view reveals the historical truth, we Greek-trained Modern Western students of history ought to coax our archive-minded colleagues into



looking at our own Western history—as far as its unfinished story has gone, up to date—with the integral and stereoscopic vision that our Hellenic standpoint affords us; and we must also break it to them gently that there are certain experiences, of vital interest for students of human affairs, on which the incomplete tale of our Western history gives us no information at all, for the simple and decisive reason that we ourselves do not happen to have met with these momentous experiences up to date.

The uselessness of an uncompleted fragment of history as a key to secrets which may be of the greatest practical as well as theoretical interest for us has been brought home to us by Late Modern Western Man's sudden panic-stricken rediscovery of the time-worn truth that everything human is mortal and that our Western Civilisation is not exempt from this universal human liability to break down and come to grief. Is our Western Civilisation actually in danger of breaking down to-day? Or has it perhaps already met with this fatal accident? We have only to put the question in these practical terms in order to see that our current history cannot be racked into divulging the answer to it; for this answer is not given in the story up to date, and even the most devilish of our Late Modern totalitarian combinations of ingenuity with 'frightfulness' is powerless to inflict a third-degree cross-examination on our Protean future. If we genuinely want light on the causes of the breakdowns of civilisations, we must resolutely turn our eyes away from our own unfinished story and look—not with an anxious astrologer's but with a serene astronomer's eye—at the history of some other civilisation that has already broken down, declined, fallen and gone into dissolution.

If this is our objective, we shall find in Greek history no less than two episodes of the kind at our disposal. We can study the breakdown of the Hellenic Civilisation in the generation of Thucydides towards the end of the fifth century B.C. and the breakdown of the Eastern Orthodox Christian Civilisation in the generation of Basil the Bulgar-killer towards the end of the tenth century of the Christian Era. Obviously we have not the time, within the limits of a single lecture, to analyse the causes of these two catastrophes, so I must be content with submitting three points to you for your consideration. My first point is that, in both these cases, the proximate cause of the breakdown will be found to be the spiritually catastrophic climax of a series of fratricidal wars between parochial states—members of the society thus committing social suicide. My second point is that this crescendo of ever more irreparably devastating warfare is not the primary cause to which the breakdown has to be attributed, but proves in both cases to be a symptom of a deeper-seated malady. My third point is that, while the proximate cause, in the shape of the scourge of war, is identical in both cases—and indeed not

only in these two, but in a number of others as well—the primary causes are diverse.

In the history of Eastern Orthodox Christendom, the *fons et origo* of the breakdown was a rejuvenated East Roman Imperial Government's fatal success, in and after the eighth century of our era, in re-establishing its ascendancy over the Church, in contrast to the Church's auspicious success, in the contemporary and corresponding mediaeval chapter of our Western Christian history, in resisting the attempts of a fortunately incompetent Western 'Holy Roman Empire' to emulate the perversely efficient East Roman Empire's feat of reducing the Church to the rôle of a department of state. In the history of the Hellenic Civilisation, the primary cause of the breakdown was the failure of a society whose politically sovereign parochial communities had become economically interdependent to create an oecumenical political framework for a body social which was now irrevocably 'one world' on the economic plane.

This fatal discrepancy between economic achievement and political failure which, in Hellenic history, brought its nemesis in the outbreak of the Atheno-Peloponnesian War of 431-404 B.C., comes home to us in Western Christendom in our generation, because we can see at once that the unsolved problem with which our own society is wrestling in our day is identical with the problem which defeated the Hellenes in the fifth century B.C. with fatal consequences for the future of the Hellenic Civilisation; but, in recognising the identity of the problem, we must, of course, be on our guard against falling into a fatalistic assumption that, because the Hellenes happened to be defeated by it, we too are bound to be defeated likewise now that we are facing the same ordeal. Though the Hellenes did in fact fail to respond to this challenge, we have no warrant at all for assuming that their failure was pre-determined and inevitable; and therefore the mere fact of their failure does not doom us to fail in our turn. So far from that, our awareness of the Hellenes' failure to solve the very problem with which we ourselves are at grips to-day increases our chance—if we choose to seize the opportunity—of solving the problem in our case and thereby mastering our fate in this current chapter of our history; for our knowledge of the completed story of the corresponding episode of Hellenic history gives us light on our common problem which the Hellenes did not possess, while the warning which the Hellenes' failure gives us of our own danger ought to stimulate us into making a supreme exertion to escape the Hellenes' fate by eschewing their manifest moral errors and avoiding their manifest intellectual mistakes.

*Encounters.*

In the course of their respective histories, societies of the species called civilisations, of which Hellas and our two Christendoms are representatives, have encounters with one another that are events of outstanding historical importance; and, here again, the morphology of history can be illuminated by bringing Greek searchlights to bear on it, since this phenomenon of encounters has played a prominent part in the histories of at least two out of the three civilisations that have blossomed on Greek soil so far. The history of Eastern Orthodox Christendom has been deeply affected by relations with the sister society of Western Christendom ever since the eighth century of our era, while the history of the Hellenic Civilisation became, from Alexander's generation onwards, virtually a story of the relations of Hellenism with the other civilisations that were alive in the Old World in that age.

The vicissitudes of the long-drawn-out encounter between the two Christendoms are a fascinating subject. The shock suffered by the Byzantines in the eleventh century, when they awoke to the fact that the barbarous and schismatic Latins had gained a military, political and economic ascendancy over Eastern Orthodoxy and Greek Civilisation, so deeply embittered these mediaeval Orthodox Christian Greeks that when, in the fifteenth century, they were confronted with the terrible choice of submitting to either a Frankish or a Turkish domination, they deliberately opted for the Prophet's turban in preference to the Pope's tiara; and they continued in this anti-Western state of mind and feeling until after the opening of the seventeenth century, as was demonstrated by the fate of the Calvinist-minded Oecumenical Patriarch Cyril Loukaris. Yet, before the close of the same seventeenth century, the attitude of the Orthodox Christians towards the West had undergone a revolutionary reversal both in Ottoman Orthodox Christendom and in Russia. It had boxed the psychological compass by changing from an attitude of hostility, contempt and repudiation into one of friendliness, admiration and imitation; and thereafter the tide of Orthodox Christian feeling continued to run in this reverse direction till after the opening of the century through which we are now living. At the time of my own visit to Greece in 1911-12, all observers would have taken it for granted that, both in Russia and in the Greek and other Orthodox Christian successor-states of the Ottoman Empire, the course of cultural navigation was now long since irrevocably set towards the goal of a complete and unreserved assimilation of the Orthodox Christian culture to the Western culture in its Late Modern secular vein; and so it would have continued to seem down to the year 1917; but the new revolution in Orthodox Christendom which took the world by surprise in that year aptly illustrates the riskiness of trying to use still un-

completed historical episodes as materials for a study and understanding of the nature and destiny of Man. Down to the eve of the Bolshevik Revolution, who would have dreamed that Russia was going to repudiate Peter the Great's policy of Westernisation in the name of a Western-made anti-Western Marxist ideology? And who again, before the Second World War, would have guessed that in 1950 the Orthodox Christian countries in South-Eastern Europe—Roumania, Bulgaria, Jugoslavia, Greece—would be battlegrounds in a world-wide 'cold war' between a Communist Russia and a Liberal United States for the conversion of Mankind to one or other of two rival alternative ways of life?

A student of History will find a more promising field for the pursuit of his inquiry if he turns his eyes away from this unfinished drama to examine the encounter between a post-Alexandrine Hellenic Civilisation and its Oriental contemporaries; for this drama has long ago been played out to its finish, and the last act, which turns out here to be the key to the whole play's historical meaning, is an act which is still below the horizon in our current and continuing encounter between two ex-Christian living cultures. In the last act of the encounter between Hellenism and its contemporaries, the *dénouement* was the epiphany of Christianity, the Mahāyāna and other 'higher religions' which rose above the battle of competing secular cultures and, in rising, were able to draw from both sides their inspiration for giving history a new turn by lifting Man's endeavours onto a loftier spiritual plane.

This Greek light on the origins of Christianity and the Mahāyāna is, in my belief, the most valuable of all the Greek light on history—but perhaps I have now cited enough evidence in support of my thesis that a Hellenist's approach to the study of history is a particularly promising one. In illustrating this Greek approach from my personal experience, I have, of course, been conscious all the time that my personal view of history is only one among a number of views that might be caught from the same Hellenic angle of vision; and all votaries of Hellenic studies have also to remember all the time that a Sinologist's alternative approach might carry him no less far than our Hellenic approach carries us towards a reading of the riddle of human affairs. The first lesson in Hellenism is to be on one's guard against the blinding sin of *hybris*.

ARNOLD TOYNBEE

## THE PLAN OF MESTA, CHIOS

What was the nature of the revolution in the manner of laying out a new town associated with the name of Hippodamos of Miletus? Aristotle suggests that it was simply a matter of regularity. The old way was to build irregularly, the new way to build regularly after the manner invented by Hippodamos.<sup>1</sup> If this is true, how came it that the regular manner was adopted, presumably, in the first half of the fifth century? What movement of ideas brought it into favour? To what special circumstances did it constitute a response? Why had it not developed earlier as an obvious consequence, for instance, of the founding of new cities in the great age of Greek colonisation? And if the new colonial cities of the eighth, seventh and sixth centuries were not planned in a regular fashion, how were they planned?

I would not suggest that these questions can all be answered by reference to the plan of a mediaeval fortified village in the extreme south of the island of Chios; but it was in the belief that it might perhaps help to throw some light on the problem of pre-Hippodamian town planning that I visited and roughly surveyed Mesta in April 1948, prompted by the apparent relevance of a note in Professor Ormerod's *Piracy in the Ancient World*,<sup>2</sup> on fortified villages in the Aegean Archipelago, to a passage in the *Laws* of Plato describing the supposed best form of defensive wall for his utopian colonial city.<sup>3</sup>

Mesta lies at the bottom of a hollow almost completely surrounded by hills, about two miles from the sea and harbour to the north-west. The harbour, and the road linking it with the town, are under observation from watch towers situated on the summits of hills to the north-east and north-west. The village itself is completely hidden from the sea, and the whole arrangement is well-calculated to afford protection against sudden attack from that quarter. Indeed, although Plato's eighty stadia are here reduced to sixteen, the siting of Mesta suggests that a contemporary reader of the *Laws* may have been well aware of more immediately practical reasons for building a city at some distance from the coast than those of a disciplinary nature given there.<sup>4</sup>

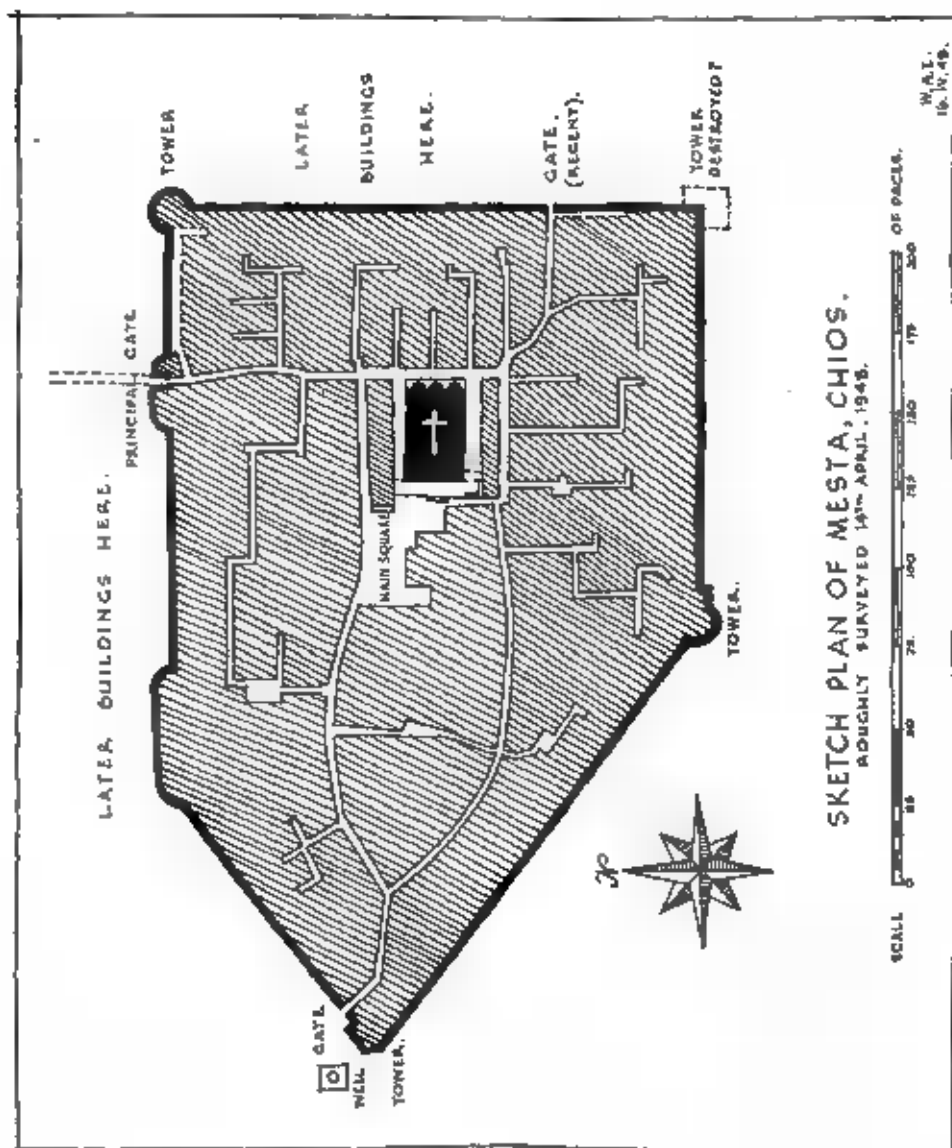
The shape of the village is that of a rectangle, measuring roughly 170 paces from north to south and 140 from east to west, with a roughly triangular addition on the west. Whether this triangular portion actually constitutes a later addition to an original rectangular plan, or is contemporary with it, is

<sup>1</sup> *Politics* VII, ii, 1320b.

<sup>2</sup> Ormerod, H. A., *Piracy in the Ancient World*, 1924, Appendix A, 36 ff.

<sup>3</sup> VI, 779.

<sup>4</sup> IV, 704.



difficult to determine. In favour of the former supposition is the information given me by villagers (with whom my only means of communication was Alexandrian waiters' French) that the north gate was originally the only entrance. Against this, however, is the fact that the main square, which has recently been partly built over on the south side, is roughly at the centre of gravity of the complete irregular pentagon (see FIG.).

Right at the centre of the rectangular portion there stands to-day a large nineteenth century church, flanked to the north and south by blocks of houses. The whole forms a nearly square island bounded on the north, east and south sides by streets having a width of fourteen feet—roughly twice the width of all other streets and alleys in Mesta. The west side of this island is occupied, as far as the middle, by the main square, on to which recent buildings on the south side have been allowed to encroach. A short, narrowing street from the south-east corner of the square forms the boundary of the central island along the remainder of its west side.

The site of the church appears to have been occupied formerly by a tower or keep, presumably that reported by Wansleben in 1673-4 to be falling into ruin.<sup>5</sup> It seems probable, therefore, that this tower, with its attendant living quarters, formed the original core of the plan of Mesta, bounded on three sides by extra-wide streets, and on the fourth, at least partly, by the square.

The street to the east of the site of the tower is continued northwards at normal width (six feet six inches) to the principal gate. Those to the north and south are similarly prolonged westward in a curving line, to converge, near the west gate, into a single curving street. These constituted the main system of circulation of the village before the recent south-east gate was pierced. From them a series of *culs-de-sac* and alleys run, most of them at right angles, to end at a distance of one building depth from the outer walls.<sup>6</sup> This building depth is occupied by continuous blocks of houses originally built so that their blank outer walls formed the outer defensive wall of the village, though windows and doors have been broken through from many of the houses since the wall was no longer required for its original purpose. At the principal gate and at each of the angles except the south-east there is a salient defensive tower. There are also signs that there was formerly a similar tower, now destroyed, at the south-east angle. Access to this, and to the still-standing north-east tower, is provided at ground level by a covered alley immediately adjacent to the wall. Above it the first floors of the houses extend right to the outer wall.

Apart from the main square, the streets, the *culs-de-sac*, and the alleys, and

<sup>5</sup> Argenti, P. P., 'H Xios mapá tois ysaopátois kai marmyrois (1946), I, 290.

<sup>6</sup> The plan is drawn according to measurements

obtained by pacing. There was no means of checking whether or not the *culs-de-sac* (e.g. on the south side) terminated at equal distances from the outer wall.

■ few small garths not shown on the plan, the whole area within the walls is built up solid with houses of two or three storeys. The demand for space was at one time so great that many of the streets are built over at intervals above the ground floor. The building material is limestone used in small squared blocks. Each house consists of a number of bays (usually two) spanned by semi-circular barrel vaults on each floor. The roofs are flat. Windows and doors are spanned by square lintels, generally with semi-circular relieving arches above them.

All appearances suggest that the same forms have been used almost unchanged for centuries. Buildings bearing early nineteenth century dates are similar to others which, from the state of the masonry, appear to be much earlier, and the most that can be said about the date of the foundation of Mesta is that it is mediaeval. Probably it is to be attributed to the early years of the Genoese administration of Chios (1346-1566), the earliest reference to it quoted by Mr. Argenti being that of Christophorus Bondelmontius in 1422: *Amistae portum laudamus et turrim*.<sup>7</sup>

Whatever the date, however, there are good grounds for assuming that at least one feature of the plan of Mesta—the use of the outer walls of houses on the perimeter as the defensive walls of the village—is in conformity with a tradition of very long standing in the islands of the Aegean. The passage in the *Laws* of Plato already referred to hints at something of the sort, and archaeological evidence of a similar arrangement from the seventh century B.C., or earlier, exists at Vroulia, in the island of Rhodes.<sup>8</sup> Here a headland, having precipitous cliffs towards the sea, was defended on the landward side by a line of buildings, generally one, but sometimes two, rooms deep, strung across the neck of the headland, and presenting a blank wall to landward. Vroulia can hardly be said to have been a town, and in any case the peculiarities of the site were bound to make it differ from an inland fortified place; but the idea of houses joined each to each to form a defensive wall is certainly there.

If this idea is applied to an inland town or village, where the defensive wall must form a closed circuit, there follow certain consequences which may be observed at Mesta. First, the size of the town must be limited and known from the start. This implies a definite act of foundation. Secondly, the houses on the perimeter can be approached only from the interior, and in its simplest form this means that there must at least be a central open space surrounded by a single thickness of buildings approached directly from it. Further, the necessity of limiting the number of gates imposes ■ similar limitation on the means of access to the centre, and, in a more complex example

<sup>7</sup> *Op. cit.*, I, 14.

<sup>8</sup> Kinch, K. F., *Vroulia*, 1914. Col. 5-8 and plan at end.



such as Mesta, this gives us a very few main streets leading to the centre. From these, access to the remainder of the town must be by means of concentric loops, as in the north-western quarter, or by *culs-de-sac*, as elsewhere. Such an arrangement, complicated at first glance, but extremely simple in principle, is one that could be set out according to custom by a band of colonists. The position and extent of the central square (or, in the case of Mesta and other mediaeval foundations in the south of Chios, the central tower) and the position of the limiting walls would first have to be determined, after which the intermediate spaces could be divided into lots and provision made for access to them. It should be noticed, incidentally, that *culs-de-sac* impose fewer limitations on the surveyors, as a means of approaching the intermediate lots, than loops.

The result of a flexible application of this method, according to the exigencies of site and private requirements, is a plan which, though obviously systematic when analysed, appears, to a stranger entering a place for the first time, to be thoroughly haphazard. In the case of Mesta the narrowness of the streets, which means that the slightest deviation from the straight has the effect of closing the vista, aggravates the stranger's confusion. Anyone who has tried to find his way for the first time, unguided, from one point to another in Mesta will have no difficulty in appreciating the predicament of the Thebans who, when surprised in the agora at Plataea, were unable to find their way out, and even mistook the door of a house built up against the wall for the gates of the city: nor will it seem strange to him that the Plataeans could surround the Theban attackers, and block the ways of escape unseen, by breaking through the party walls of the houses.<sup>9</sup> Finally he might be tempted to wonder whether it might not have been some such plan which Aristotle had in mind when he referred to the old irregular method of building towns, as compared with the newer, regular method associated with Hippodamos, as exemplified, for instance, at Olynthus. Answers to such questions must obviously await the excavation of authentic colonial sites. In the meantime there would appear to be some grounds for suggesting that the Hippodamian development may have consisted in the substitution of the system of the chequer board, capable of expansion in any direction, for an older, more integrated type of plan.

W. A. EDEN

<sup>9</sup> Thucydides II, 1-4.

# DETAILS AND CHRONOLOGY OF GREEK THEATRE CAVEAS

(PLATES I-5)

## ABBREVIATIONS

The following abbreviations have been used, in addition to those already used in the *Annual*.

- Arias. P. E. Arias, *Il teatro greco fuori di Atene*, Firenze, 1934.  
Bieber, *Denkmäler*. Margarete Bieber, *Denkmäler zum Theaterwesen*, Berlin and Leipzig, 1920.  
Bieber, H. T. Id., *History of the Greek and Roman Theater*, Princeton, 1939.  
Bulle. H. Bulle, *Untersuchungen an griechischen Theatern*, München, 1928.  
D-R. W. Dörpfeld and E. Reisch, *Das griechische Theater*, Athens, 1896.  
Defrasse. A. Defrasse and H. Lechat, *Epidaur*, Paris, 1895.  
Fiechter, A I, A III. E. Fiechter, *Das Dionysostheater in Athen*, I, III (*Antike griech. Theatergebäude*, Stuttgart, 1930-37).  
Fiechter, *Ertria*. Id., *Das Theater in Ertria* (same series; similarly Fiechter, *Megalopolis*, *Oropos*, *Sikyon*).  
Guide Bleu. Guide Bleu, *La Grèce*, 1935 ed.  
Thera. F. Hiller von Gärtringer, *Thera*, 1899-1902.

Thanks are due to the editors, and to Mr. A. M. Woodward (on the subject of the theatre at Sparta), for their kind help and criticism.

This article is intended to form a supplement to *The Greek Theatre Cavea* in *BSA* XLIII, 125 ff. In the case of the theatre of Dionysus at Athens a detailed description is not necessary, as the works of Fiechter and Pickard-Cambridge cover nearly all the ground; <sup>1</sup> comment is therefore confined to measurements of seats, etc. Theatres visited in Greece and the Aegean only are included.

## ATHENS, THEATRE OF DIONYSUS

### *Measurements of seating in the theatre of Lykourgos*

FIG. 1 (cf. *BSA* XLIII, 153, fig. 11) shows the notation here adopted for measuring the normal type of stone seating, both at Athens and elsewhere,

<sup>1</sup> C. Anti, *Teatri greci arcaici*, 55-82, has evolved new theories about the form of the theatre of Dionysus in the sixth and fifth centuries B.C. His fig. 17 gives an attempted reconstruction of what he calls the theatre of Thespis. The result is unconvincing for the following reasons. (1) As pointed out by Pickard-Cambridge, *Theatre of Dionysus in Athens*, 8, the orientation of the earliest orchestra is almost certainly fixed by the conformation of the hill-side, and must therefore be roughly at right-angles to the older temple of Dionysus (note that the wall SM3 is parallel to that of the older temple); whereas Anti's reconstruction forms an angle of 64° with the wall of the older temple. (2) The shape of his reconstructed orchestra, rectilinear on three sides and curved on the fourth, is very unlikely. (3) He makes the fragment of wall J3 form

the west side of a rectangle in the middle of the orchestra serving as an altar base or the like; but this rectangle would be 13 m. long!

Anti's fig. 18 gives his reconstruction for the theatre of Aeschylus. This includes, as stage buildings, the base T and the long hall to the south of it. As, however, fifth century sherds have been found under the north wall of the latter (cf. Pickard-Cambridge, *op. cit.*, 17), it cannot well date, as Anti would have it, to the 'primitivissimi anni' of the fifth century. His cavea for this period is trapezium-shaped, the drainage canal forming the east side of the orchestra. Such a scheme cannot be disproved, but it involves *parados* walls converging towards the stage, instead of away from it as do the existing walls.



very gentle inclination. As a result the seats are low and must have been very uncomfortable.<sup>3a</sup>

*Planning.* The orchestra circle is prolonged at each end by straight lines, as at Athens. The cavea is divided into thirteen *kerkides* with fourteen stairs, in spite of its smallness. This is obviously a direct imitation of the theatre of Dionysus, and its application here is rather unbecoming. But it is made worse by the ridiculous expedient of doubling the stairs above the *diazoma*, so that there must have been twenty-seven in the *epitheatron*.<sup>4</sup> As so many other details are copied from Athens, we can take this artificial doubling of stairs as an almost sure sign that such doubling existed also in the theatre of Dionysus.<sup>5</sup> The upper stairways are not now extant, but in the centre artificial walls and cross-walls in hard brownish-grey poros, built to support the *diazoma* and stairways, may be seen. The stairways are badly

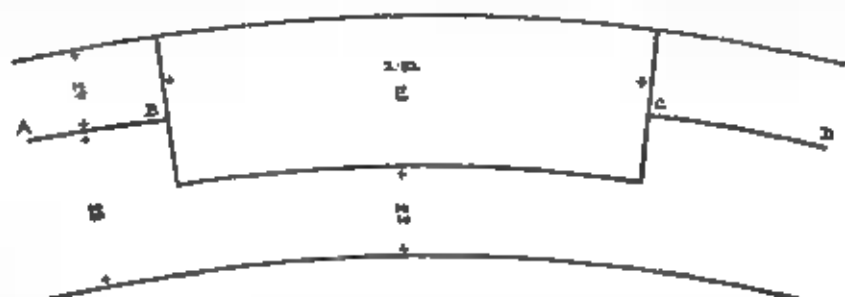


FIG. 2.—PIRAEUS (ZEA). INCISION IN FRONT ROW.

preserved at the bottom, but their positions were opposite the fourteen rosette stones which covered the water-channel on the outside of the orchestra.

*Front rows of seats.* Below the front row there is a rim, or wide shallow tier, which has a width of 1.85 m. in the centre, 2.60 m. at the wings. Philios calls this the front row, and suggests that it was designed for a wooden *prohedria*. The falsity of this view was pointed out by Dragatsis, who, with Dörpfeld, realised that the tier behind in reality formed the front row, or rather its foundation.

The latter has two peculiarities. One is a small incision first noticed by Arias,<sup>6</sup> who, however, has a theory that it held some sort of wooden strut for the support of the upper rows. As these rows are exceptionally wide and shallow, the purpose of such a support is not clear. Actually the incision

<sup>3a</sup> O. Broneer, *AJA* XXXIX, 416, says that the theatre was never completed, and doubts if it was used in its present form. The pavement of the passage between the *prohedria* and orchestra gutter was left in various stages of completion.

<sup>4</sup> Cf. Judeich, *Topographie von Athen*, 442.

<sup>5</sup> The archaeological evidence does not suffice to determine this, but owing to the size of the Athenian cavea, doubling was certainly called for.

<sup>6</sup> He gives wrong measurements (see fig. 2). Bulle (202) mentions the possibility of a wooden *prohedria*, but did not notice the incision.

must have served for a small wooden *prohedria*, for it is exactly in the middle and of the shape shown in FIG. 2. The arcs AB, CD represent the front of the ordinary seats, which together with the wooden *prohedria* (E) formed the front row.

The other peculiarity of this front row is a series of 'mason's marks', inscribed on the upper surface near the joins of stones.<sup>7</sup> There are fifty-four in all, consisting, left to right, of A to Ω, AA, BB and ΓΓ, each of the twenty-seven appearing twice. Since there were twenty-seven stairways in the *epitheatron*, these twenty-seven pairs of letters may be connected with seating arrangements in the theatre; or they may merely have served to mark the joins if the whole row was at some time dismantled and moved. For the position of these letters see FIG. 3.



FIG. 3.—PEIRAIEUS (ZEA). LETTERING.

*Seats.* All the seats have been removed except a few rock-cut ones at the side rear. Some are scattered round the neighbourhood, and Philios took measurements of several sizes of seat. But the limestone foundations on which they were situated are clearly visible, and have a height of only 20.5 cms. towards the bottom, an elevation scarcely permitting a good view or a comfortable seat. The upper tiers, however, were raised higher.<sup>8</sup>

*Stairs.* In the stairs too the theatre of Dionysus has been copied, for there is only one step to each row. There is consequently a considerable upward slope, but, as far as can be seen, the steps were not, as in Athens, cut across by ridges for the prevention of slipping. Blocks of stairs which are preserved measure: length (width of stair) 1 m., breadth 90 cms., height 22 cms. In the small rock-cut section the stairs are also rock-cut.

*Diazoma.* Of this there are no remains, except for the foundation walls mentioned above. These are necessary owing to the feeble slope of the natural hill, which caused the greater part of the cavea to be artificially banked up, and still gave only a small difference in level between one row and the next.

*Date.* Second century B.C.<sup>9</sup>

<sup>7</sup> Dragatzis, *loc. cit.*

<sup>8</sup> Up to 27 cms.

<sup>9</sup> Bulle 304; Arias 18.

THORIKOS<sup>10</sup>

Owing to the peculiar shape (rectilinear centre with curved wings) and primitive appearance of the theatre at Thorikos, many writers have ascribed to the cavea an antiquity which it probably does not possess. The theory

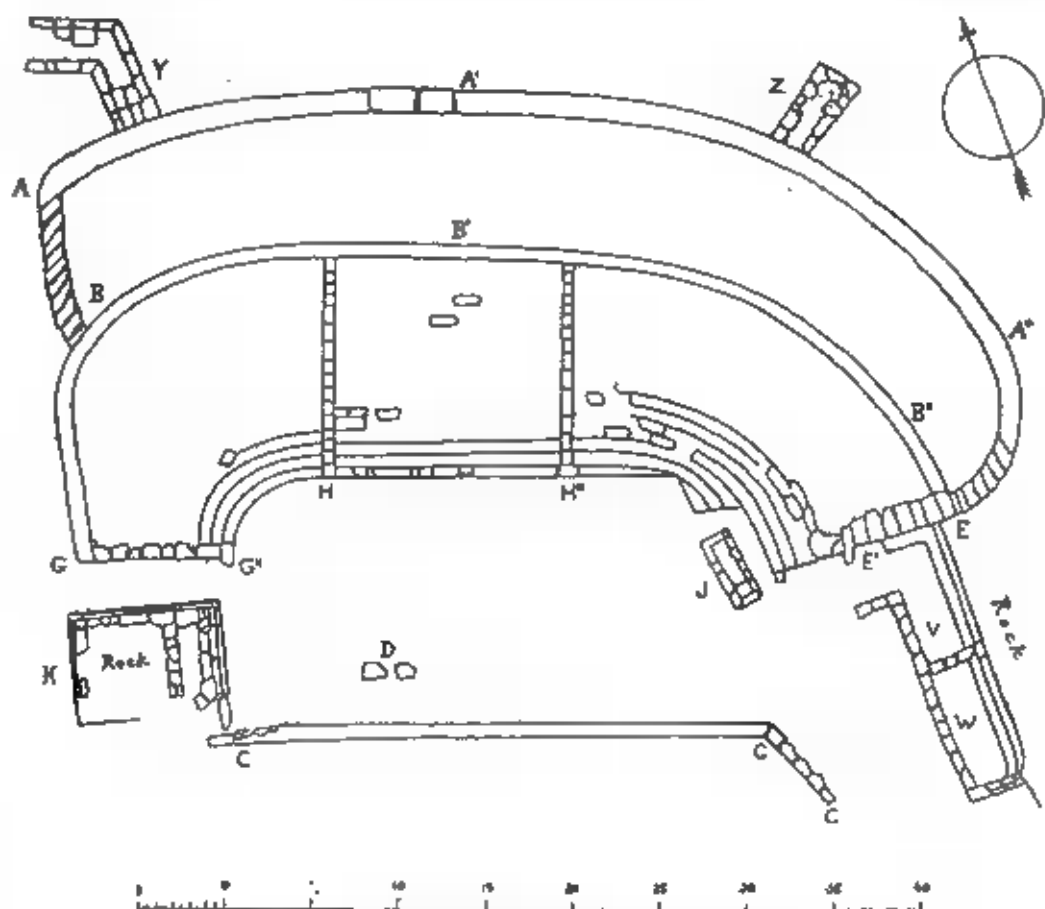


FIG. 4.—THORIKOS. PLAN. After *Papers of the American School IV*, pl. IV (cf. Bulle, pl. 15).

of a connection with the agora steps at Lato in Crete has been discussed in *BSA* XLIII, 128. Anti<sup>11</sup> sees in the rock-cut seat south of E in FIG. 4, taken with the eastern wing of wall C, a primitive *choros* earlier than 550 B.C. To

<sup>10</sup> Cushing, *Papers of the American School IV*, 23; Miller, *ibid.*, 1; D-R 109; Bieber, *Denkmäler*, 20; R. C. Flickinger, *The Greek Theater and its Drama*, 227; Bulle 9, 210; Arias, *Historia*, 1933, 55 (good photographs); Caputo, *Dioniso III*, 301; IV, 90; Arias 24; Bieber, *H.T.*, 116. Photographs PLATE 20-d.

Excavated by the American School at Athens.

<sup>11</sup> *Teatri Greci Arcaici*, 47 f.; cf. *Papers of the American School IV*, 1 ff. O. Broneer, *AJA* XXXIX, 415 f., suggests that the rock cutting was originally caused by quarrying.

this it may be objected: (1) that the rock-cut seat may have had no connection with the theatre: Anti himself compares it with the seats at the Athenian Pnyx; (2) that the eastern wing of wall C is not parallel to the rock-cut seat, and seems rather an extension of the earlier wall C, designed to provide a species of *parodos*.

*Wall C.* This was in principle a terrace wall, as the ground south of it is about 2.50 m. lower than the present top course.<sup>12</sup> It is doubtful if it ever rose high enough to form a background for scenery; and Dörpfeld<sup>13</sup> must be wrong in suggesting that a wooden *skene* could have existed to the south of it, owing to the great drop in level. Possibly this wall, dating from the sixth or fifth century B.C., is the earliest surviving part of the theatre proper. It may well, however, have been repaired or extended at a later date. The straight section 30.75 m. long is extended at the east by an oblique wall of rough stones, which appears to be of later date.

*Orchestra.* This forms a rough rectangle some 30 m. long and 14 m. (Arias wrongly gives over 16 m.) wide. When excavated it contained a deep earth fill revetted by the terrace wall and with a top layer of beaten red earth.<sup>14</sup> Originally, before being filled up, the orchestra had been roughly semicircular.

*Foundations J and K.* The base J must have been for an altar. The eastern wing of the cavea has been carefully cut so as to leave it clear. Miller's suggestion (*loc. cit.*, 10) that J may have been a *prohedria* is untenable. As to K, it has rightly been identified as the temple of Dionysus. Near it a fourth century B.C. inscription<sup>15</sup> ΔΙΟΝΥΣΩΙ was found, also a bronze coin; but Cushing and Arias are wrong in accepting these as evidence that the temple cannot be earlier than the fourth century.

*Rock wall south of E.* This has been accurately described in *Papers of the American School IV*, and elsewhere. Its original use is obscure, but it seems to have had no direct connection with the theatre. Later it was converted into two small rooms, V and W, probably for the use of actors.

*Lower half of cavea.* The central *kerkis* is completely rectilinear, and consists of some nineteen rows, now poorly preserved, divided off at each side by a narrow stairway. On the outside of these stairways the rows become curved, and are bounded by the *parodos* wall G-G' and the wall E-E'. The whole is encircled by an *analemma* (G-B-B') of remarkable shape, following the curves of the rows of seats. This is made of small square blocks, 10-20 cms.

<sup>12</sup> Cushing, *Papers of the American School IV*, 30, estimates that in order to reach to the level of H (the first row of seats) it must have been 4.87 m. (16 ft.) high. This is true, but it is more likely that there was a downward slope from north to south in the orchestra.

<sup>13</sup> D-R III. There is also no room for a narrow podium, which Cushing restores on the edge of the orchestra; for the latter is already quite narrow enough without further curtailment.

<sup>14</sup> Cushing, *loc. cit.*, 30; nothing now visible.

<sup>15</sup> Cushing, *loc. cit.*, 31.

high, the joints being filled in with pebbles. The *parodos* wall G-G' consists of square blocks of this kind alternating with larger blocks. The wall E-E' is cut out of the rock, and the stones laid on this appear, as in the upper section, to be merely seats, with no parapet terminating them—a rather dangerous arrangement for the spectators, as there is a considerable drop at this point.

*Seats.* These are of local bluish stone, well worn, and quite plain, without a sinking for the footrest. Height 25–35 cms.,<sup>16</sup> width 61–65. This does not allow much foot-space, and the theatre is not a comfortable one.

*Stairs.* There are only two stairways and three *kerkides* in the lower section, the same (not preserved) in the upper. The two stairways in the lower section are unusually steep and only 62 cms. wide (the normal width in other theatres is 90 cms. or 1 m.).

*Extension of cavea.* The upper half of the cavea has been proved to have been an addition to the original scheme. The point where the old and new *analemmata* meet near E is clearly marked, as the stones are not bonded together; while at B there is a noticeable angle. By this extension twelve new rows were added, and the old *analemma* wall fell into disuse, while the new one, outside it, followed approximately the same curve. Here again the seats extend on to the wall top; elsewhere they are not well preserved. The appearance of the *analemma* from the rear can be seen in PLATE 2c; this also shows the entrance Y, which, like the entrance Z, passes over a pointed arch.<sup>17</sup>

*Dates and development of cavea.* As has been shown in BSA XLIII, 127 f., it is most unlikely that there is any connection between the rectilinear 'grandstand' at Lato in Crete and the cavea at Thorikos. The theory that the slope of the hill rendered a rectilinear cavea easier to construct, and that only the sides had to be curved, must be abandoned in view of Cushing's discovery that the natural shape of the hill was semicircular. Arias, following Bulle, distinguishes sixth and fourth century building, but does not state how much he attributes to the sixth century. In reality the building periods should be further subdivided. The following succession would easily account for the principal peculiarities, but in the absence of exact dates the chronology can only be a relative one:<sup>18</sup>

(a) Wall C constructed to support orchestra terrace. Spectators watched from hill slope above.

(b) It is possible that wooden benches were erected in what was later

<sup>16</sup> Cushing gives 35 cms., Arias 25. The actual measurement of the bottom (first) row proved to be 32.5 cms., of the second row 31 cms.

<sup>17</sup> These arches may have been constructed for

drainage purposes. Y has an angle turning westwards.

<sup>18</sup> The fortification of Thorikos by the Athenians in 409 B.C., mentioned in Xen. *Hell.* I, 2, 1, has no immediate bearing upon the extension of the theatre.



the central section of the lower cavea (H-H'). These would be rectilinear, and would only be about 15 m. long.

(c) These wooden benches were replaced by stone seating of locally quarried stone. There would be no *analemma* at this stage, but probably lateral stairways.

(d) Stone benches would be added on either flank, and in order that the spectators might face the orchestra, these benches would naturally curve round. This curve would in any case be necessary on the east side, owing to the outcrop of rock. On the west side the curve could be artificially embanked where necessary, and brought round so as to leave a passage between the cavea and the temple (K) which may already have been in existence.<sup>19</sup> The presence of the altar (J) necessitated the cutting off of a few rows of the cavea at the east wing. *Analemmata* surrounded the whole.

(e) The upper section was added,<sup>20</sup> including a further section of *analemma* and the entrances Y and Z.

(f) In order to provide facilities for simple acting, the rooms V and W were built on to the rock-cut seats, and a wall added opposite, at an angle to the wall C, in order to provide an east *parodos*, converging towards the exterior.

It may be objected that the wall C is not dated early enough to be placed first in order; but the dating of terrace walls is often open to dispute, and it may have been repaired to a great extent. It is doubtful whether this wall can be connected with any kind of *skene*; as at Ikaria and Rhamnous, there seems to have been no real stage and practically no facilities for actors—none, that is, until the rooms V and W were constructed.

#### RHAMNOUS<sup>21</sup>

*Situation.* The acropolis is near the sea, and lies to the north of a higher hill on which are the temples of Nemesis. Between the two hills, on the acropolis slope, is the space used for dramatic performances.

*Planning.* The acropolis fortification wall constitutes the upper limit of the cavea. No seats are preserved except the front row, which consists of two rectilinear bases of local marble, side by side. The wider east one supported the *prohedria* thrones described in *BSA* XLIII, 176. The narrow west base<sup>22</sup> has six incisions for stelai, which have not survived but doubtless bore inscriptions. The 'orchestra' is roughly rectangular, and extends

<sup>19</sup> W. Wrede, *Attische Mauer*, 34 suggests that the temple is contemporary with the extension mentioned in (c) above.

<sup>20</sup> Wrede, *loc. cit.*, remarks that Bulle's early dating of this extension to the late fifth century is not justified,

later sherds having been found below the extension.

<sup>21</sup> Bibliography in *BSA* XLIII, 176, n. 2. Photograph PLATE 2a. Excavated mostly superficially in 1879.

<sup>22</sup> See PLATE 2a.

from the *prohedria* to a parallel wall 11.20 m. distant. Beyond this again is a terrace wall 6.20 m. further south.<sup>23</sup>

*Appearance of theatre.* The cavea behind the *prohedria* cannot have had any kind of seating, as it shows no trace of the irregularities in the rocky slope having been evened out.<sup>24</sup> The orchestra is of roughly square shape, bounded on two sides by the *prohedria* and the first wall. As to the space between the

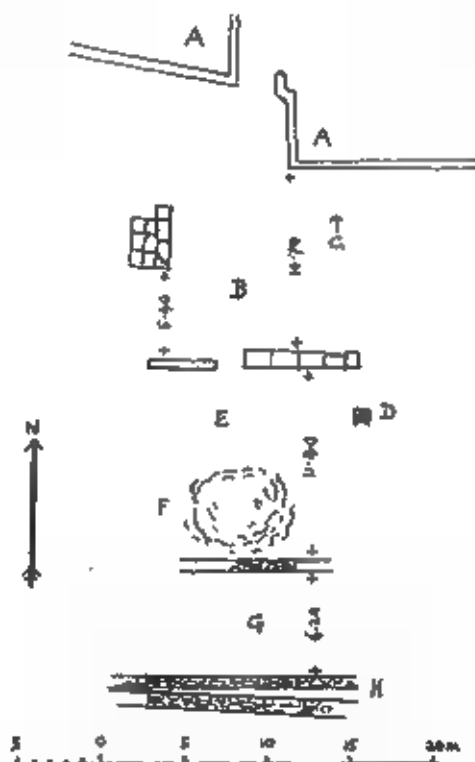


FIG. 5.—RHAMNOUS. PLAN. (After Bulle, pl. 1c).

A Acropolis walls. ■ Auditorium. C Rising ground. D Statue base (not *in situ*). ■ Orchestra. F Debris. G Dressing room (?). H Terrace walls.

first wall and the terrace wall, Bulle has no reason to call it a *bouleuterion*. It must have been completely open on each side, and can only have served the purpose of a dressing and waiting room for the actors. The orchestra, which had a slight slope away from the cavea, was the only place for acting, as in other theatres in Attic demes.

*Inscriptions.* In the first place, it seems that the area was called a θέατρον. An inscription<sup>25</sup> says: 'Αναγράφει δὲ τόδε τὸ ψήφισμα ἐν στήλει λιθίνει καὶ στήσται

<sup>23</sup> Bulle's measurement; it appeared to me to be nearer 5.50 m.

<sup>24</sup> On this point Bulle is right, Arias wrong.

<sup>25</sup> *PAE* 1891, 16.

ἐν τῷ θεάτρῳ (fourth century B.C.). This may refer to one of the stelai from the base mentioned. Secondly, we know that performances of comedy took place, owing to the occurrence of the word κωμῳδοίς in one inscription.<sup>26</sup> Apart from the *prohedria* dedications, we have a further dedication to Dionysus,<sup>27</sup> who had a temple nearby.

*Date.* Together with Ikaria, Rhamnous is the simplest form of theatre we know. Bulle (4) dates the *prohedria* to the fourth century B.C., and the walls cannot be earlier than the fourth century, which is the date of the inscriptions. A kind of theatre, however, may have existed here earlier, though without stage or seating of any description.

#### IKARIA<sup>28</sup>

*Situation.* Near the modern village of Dhióniso,<sup>29</sup> to the north of Mount Pentelikon, on a gently sloping site above a stream. The public buildings are grouped round the agora. To the east is a choregic monument, an unusual feature for such a small theatre, and not situated on the same side of the agora as the theatre. North of this is a small temple, and towards the west further buildings, including a temple identified as the Python. South of the latter are supporting walls and an altar; and to the extreme south, the theatre. The whole is on a very small scale.

*Planning.* There is the closest resemblance to Rhamnous. No acropolis wall exists behind the auditorium, but the latter is constituted by an even rougher slope, obviously not intended for seats. A feature not mentioned in the accounts is a fragmentary wall of three large blocks, facing east and west, lying 20 m. S.S.W. of the *prohedria* (K). This may have constituted the boundary of the auditorium. As at Rhamnous, we have bases for stelai side by side with bases for the *prohedria*, which has been described in *BSA* XLIII, 177. The orchestra is a rectangle 19 m. long but only 8 m. across; for, facing the *prohedria*, is a terrace wall, supported by buttresses (not niches for dedications, as Bulle thinks), and flanked by two short walls of unequal length and at different angles, as shown in the plan.

*Use of theatre.* The appearance and use must have been very similar to those at Rhamnous. The choregic monument shows that acting must have taken place; no doubt the actors were able to wait their turn behind the terrace wall, and the struts may also have supported a wooden ladder for

<sup>26</sup> *JG* II 1278.

<sup>27</sup> Also recorded in *PAE* 1891, 16.

<sup>28</sup> Bibliography in *BSA* XLIII, 177 n. 1. Photograph PLATE 2c. Excavated by the American School at Athens, 1888-9.

<sup>29</sup> It has naturally been conjectured that the modern name Dhióniso has some connection with the

ancient ceremonies in honour of Dionysus; and this view is upheld by D. M. Robinson in *Hesperia* XVII, 141, n. 1. But the only ancient name for the place was Ikaria, and there is no evidence for the name Dhióniso earlier than Turkish times; one explanation might be to refer it to a landowner or innkeeper of that name!

them. There are four pertinent inscriptions from Ikaria: *IG I<sup>2</sup> 186-7* (about 440 B.C.; cf. *AJA* 1st Ser. V (1889), 308); *IG II 1281b, 1282b, 1285b* (all fourth century B.C.). Thespis, who came from Ikaria, may have performed frequently in his native deme before travelling round Attica.<sup>20</sup>

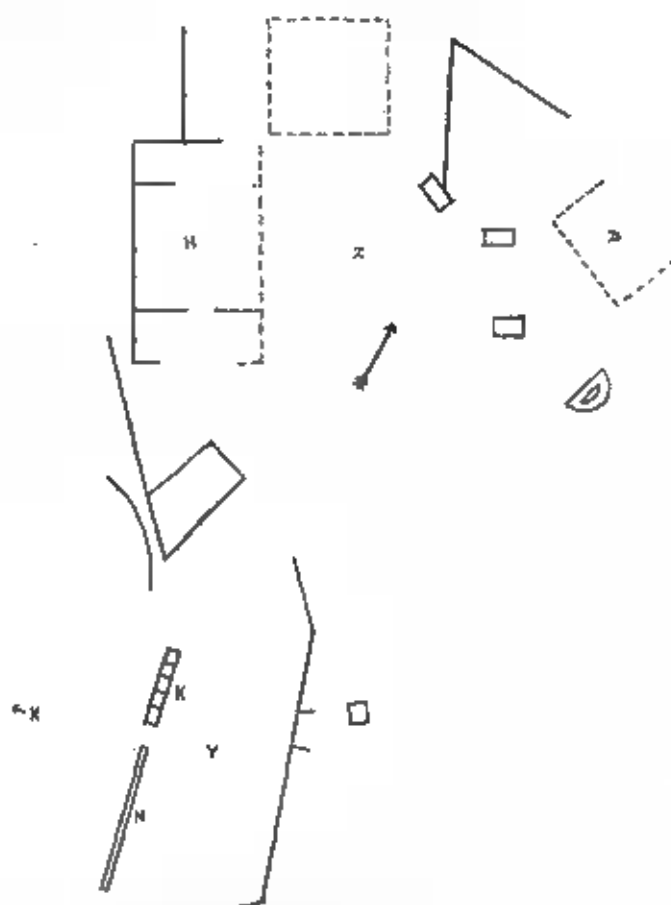


FIG. 6.—IKARIA. PLAN. After *Papers of the American School V.*

■ Small temple. H Python. K *Prohedria* of theatre. N *Scal* of theatre. X Rising ground. Y *Orchestra* of theatre. Z *Agora*.

*Date.* From whatever date a theatre may have existed in Ikaria, the present remains are very similar to the Rhamnous theatre, and may be contemporary with it.

<sup>20</sup> The numerous references to Thespis may be found in Pickard-Cambridge, *Dithyramb, Tragedy and Comedy*, 97.

ORÓPOS<sup>31</sup>

*Situation.* The theatre is not in the ancient town of Oropos, but at the shrine of Amphiaraos some two miles away. Here, in a shady valley, was a large precinct with temples and stoas, to which pilgrims came to be healed, as at Epidauros. The cavea is built on a hillside facing S.E. towards the valley. The orchestra has a diameter of over 12 m., almost equal to the length of the proscenium, but this measurement includes the five thrones placed inside it.<sup>32</sup>

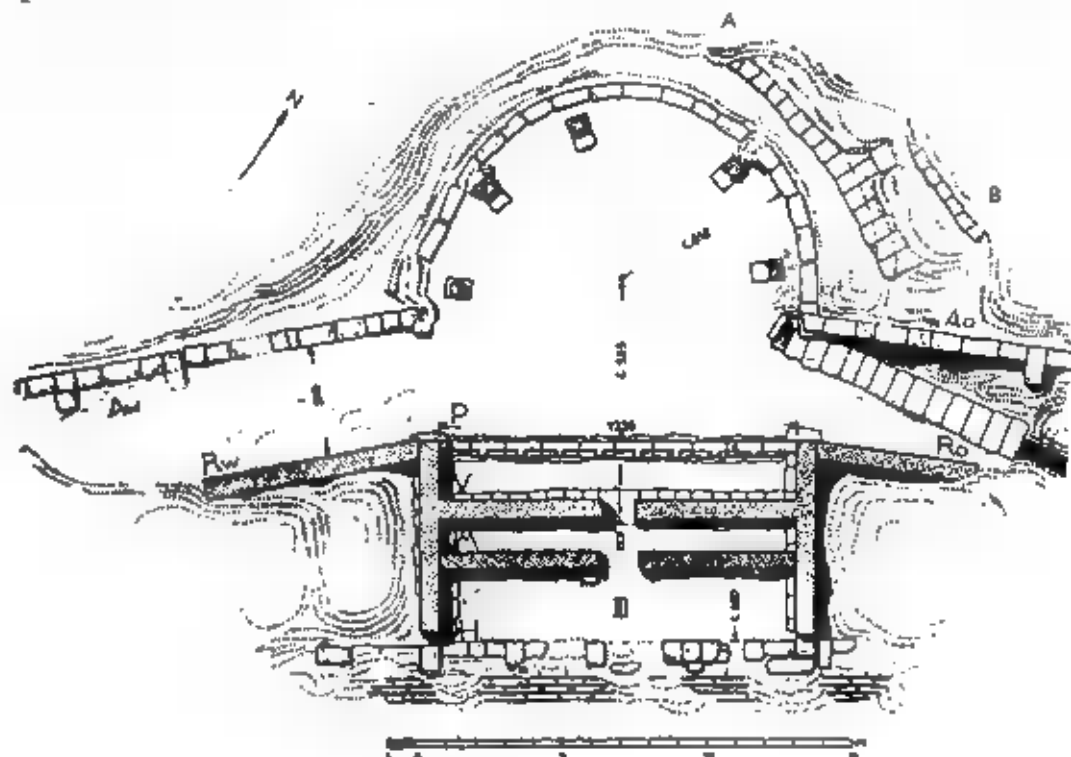


FIG. 7.—ORÓPOS. PLAN OF THE THEATRE. From Fiechter, *Oropos*, pl. I.

*Planning.* As usual, the cavea forms rather more than a semicircle. The *parodos* walls are almost exactly parallel to the walls on either side of the stage, which support a slope leading up to it.<sup>33</sup> There is no trace of a canal round the orchestra, although one can be seen cutting the east *parodos*; but there is a row of white marble slabs forming a semicircle behind the thrones. Fiechter's statement that its ends are prolonged in tangent (*i.e.*, straight) at

<sup>31</sup> Bibliography in *BSA* XLIII, 180, n. 1; also *Antiq.*, *Teatri Greci Arcaici*, 110 ff. For Dörpfeld's supposition of an earlier theatre nearby, see p. 33

below. Excavated 1886.

<sup>32</sup> See *BSA* XLIII, 180.

<sup>33</sup> 'Ro' 'Rw' in Fiechter, *Oropos*, pl. I.

each side is not beyond question, as it can be seen, on the actual site, that the slabs have been much displaced.

The number of the marble thrones, which, as at Priene, are inside the orchestra circle, is five. From this Fiechter concludes that the cavea was divided into five *kerkides*: Arias questions this, but adduces no arguments. If there had been five *kerkides*, we should have expected the third throne to be exactly in the centre of the rim or nearly so: actually it is several feet west of the centre. This suggests that it was placed there in order to avoid blocking the central stairway.<sup>34</sup> If there was a central stairway, the number of *kerkides* was even, perhaps six. At both Oropos and Priene the thrones are spaced unequally, and at Priene they do not avoid the stairways, as there is a passage between; but some kind of symmetry in the centre of the cavea is almost universal, and we must assume a reason for its absence.

*Seating and stairways.* No traces of these remain, nor can any surviving stone be said to belong to them; the possibility of a wooden auditorium should not be excluded. As to the stone remains now visible (A, B in fig. 7), Arias<sup>35</sup> is correct in saying: 'The series of slabs of local stone, which does not even follow the arc described by the orchestra, has evidently no other purpose but to hold up the falling soil'. Anti, to support his theory of the 'trapezoidal' origin of the cavea, has to suppose, wrongly, (a) that these were rectilinear (A actually shows a distinct curve); (b) that they were originally seats rather than substructures.

*So-called 'small theatre',<sup>36</sup> and chronology.* An inscription from Oropos, dated 387 B.C., refers to the construction of a water channel, and continues: <sup>37</sup> λίθοις δὲ χρίσεται τοῖς ἐκ τοῦ θεάτρου τοῦ κατὰ τὸν βωμόν. Dörpfeld unearthed from an altar, about 100 yards from the theatre, a series of stone tiers (only three now remaining), forming a partial ellipse in shape, and wrote: <sup>38</sup> 'Vor dem alten Tempel . . . lag ursprünglich ein Altar des Amphiaraos zusammen mit einigen anderen Altären. Um diesen Altarplatz wurde noch im V. Jahrhundert ein einfaches, elliptisches Theater von der Gestalt desjenigen von Thorikos erbaut.' Relying on the inscription, he supposed that the remaining tiers were taken away to form a water channel, these lowest three having perhaps become buried by 387 B.C.

This has rightly been doubted by other writers. The excavation may well have discovered the θεάτρον mentioned in this inscription, but the latter need not have been what we should call a theatre. As there is no evidence of dramatic representations at Oropos in the fifth and fourth centuries, Arias

<sup>34</sup> At Priene there is not a throne exactly in the centre, as this is occupied by an altar. See A. von Gerkan, *Das Theater von Priene*, pl. IX, and *BSA* XLIII, 180.

<sup>35</sup> *Op. cit.*, 66.

D

<sup>36</sup> Dörpfeld, *AM* XLVII, 26; Fiechter, *Oropos*, 26; Arias 74; Caputo, *Dioniso* III, 308, n. 20.

<sup>37</sup> *IG* VII 4255, 29; cf. *PAE* 1887, 62.

<sup>38</sup> *AM* XLVII, 27.

supposes the oval tiers to have belonged to the auditorium of a stadium for gymnastic games etc., such as are mentioned in *IG VII* 4254, 414. But the sanctuary of Amphiaraos was over two miles from the actual town of Oropos;<sup>39</sup> except at special times of pilgrimage the shrine would have been virtually deserted, and so it did not necessarily require a stone auditorium. The words *κατὰ τοῦ βωμοῦ* may well have been inserted to avoid confusion, i.e., there was, in 387 B.C., also a *θέατρον* proper. In that case Dörpfeld and others<sup>40</sup> are incorrect in assuming that the Hellenistic stone theatre had no predecessor on the same site. It seems most reasonable to suppose that the site of the real theatre, used for dramatic performances, never changed,<sup>41</sup> and that this *θέατρον κατὰ τοῦ βωμοῦ* was not a theatre at all in our sense of the word, but a small series of steps on which spectators probably stood to watch processions and competitions.

#### ERETRIA<sup>42</sup>

The history of the existing orchestra and cavea at Eretria has been unravelled through the preservation of the old *skene* at the back of the later stage buildings. As the old *skene* is at the same level as the *logeion*, and therefore about 3 m. higher than the present orchestra, it follows that the orchestra must have been excavated in Hellenistic times and the cavea pushed further away from the old *skene*. From beneath the proscenium (*hyposkenion*) a vaulted passage passes under the *logeion* and old *skene*, and what may be 'Charon's steps'<sup>43</sup> lead below the orchestra and emerge under its centre. Fiechter, *Eretria*, fig. 28 gives a good idea of how the change was made.<sup>44</sup> It seems likely that the first cavea was provided with wooden seats on scaffolding, as the theatre was situated in a plain with no elevation.<sup>45</sup> The second cavea, on the other hand, was partly excavated below ground level, partly supported on an earth embankment erected with earth from the excavation. This can be dated to about 320 B.C.<sup>46</sup> Brownson compares Mantinea and Megalopolis for embankments, but that at Megalopolis was only on the wings.

*Situation.* In the middle of the plain, between the acropolis (on a low hill) and the sea, adjoining the temple of Dionysus. The cavea faces almost due south.<sup>47</sup>

<sup>39</sup> The latter was near the modern Markópoulo in north Attica.

<sup>40</sup> Fiechter, *Oropos*, 13 f., 26 considers that the whole layout forms an 'Einheit', and dates the first period of the theatre, including the cavea, to 300-250 B.C.; Bulle gives 200 B.C.

<sup>41</sup> Anti dates the stone substructures to the fifth century. This is probably too early; but there may have been, in the fourth century, *krepidia* resting on stone supports.

<sup>42</sup> Photograph PLATE 16 below. Best account by

Brownson, *AJA* 1st ser. VII (1893), 268; Fiechter, *Eraria*, 26; D-R 112. Excavated 1890-1.

<sup>43</sup> Poillex IV, 132.

<sup>44</sup> Cf. D-R 114.

<sup>45</sup> Cf. *BSA* XLIII, 133, 150. As pointed out by R. E. Wycherley, *JHS* LXVII, 197, Eretria can contribute nothing to Anti's theories.

<sup>46</sup> Bulle (91) and Arias (117) date it to about 300 B.C.; cf. Fiechter, *Eretria*, 7.

<sup>47</sup> As at Athens, but contrary to Vitruvius' recommendations (cf. *BSA* XLIII, 133).

*Planning.* The ground plan is circular with prolonged ends, of the Athens type, and is divided by twelve stairways into eleven *kerkides*; only some of the stairways can be seen, but the number is beyond doubt. There is no evidence of a *diazoma*,<sup>47</sup> or of back entrances as at Mantinea; and nothing of the circular *analemma* exists.

*Stairs.* Width of stairs 94 cms.; but lateral stairs narrower. Brownson<sup>48</sup> states that the steps, which have a height of 14.5 to 16 cms. and a considerable slope, are exceptionally arranged so that four steps correspond to three rows of seats. It is difficult to affirm this from inspection, owing to the ruinous condition of the cavea.

*Seating.* See BSA XLIII, 158 f.

*Prohedria.* It is stated by the excavators<sup>49</sup> that marble fragments, perhaps belonging to thrones, were found in the orchestra. There is no room for marble thrones in the cavea, and if such existed in the orchestra they have left no traces.

*Date.* Bulle (86 f.) gives reasons for dating the original theatre to about 441-411 B.C., and Fiechter<sup>49a</sup> concurs. The date of the reconstruction has already been mentioned.

#### CHAIRONEIA<sup>50</sup>

*Situation.* The cavea is rock-cut, and is situated on the steep north slope of the acropolis hill. It therefore faces north, and as it gets little sun except in midsummer, is particularly cold and damp. It had, however, a fine view over Lake Kopais.

*Planning.* This is conspicuous by its absence. There are no stairways, in spite of the steep angle of the cavea and the wall of rock which shuts off the four upper rows. Also there are no visible stage buildings, no extant *prohedria*, no recognisable *parodoi*, no real *diazoma* or *analemma*. The rows of seats have only a slight curve and are poorly worked. If, in spite of all, there is no doubt that this was a theatre, that is partly due to the discovery of a late Hellenistic inscription,<sup>51</sup> which reads:

..... Διονυσίων π. . .  
 ..... τὸ π[ροσκήνι]ον  
 μετὰ τῆς γυναικὸς Σ[ωκρατί]ας  
 ..... Διονύσωι  
 ..... ἀ]νέθηκε.

<sup>47</sup> There can only have been twenty-five rows in all.

<sup>48</sup> *ΔΙΑ* 191 ser. VII (1892), 270.

<sup>49</sup> *Ibid.*, 267.

<sup>49a</sup> *Oropos*, 26 f.

<sup>50</sup> Leake, *Travels in Northern Greece*, ii, 112; Ulrichs, *Reisen in Griechenland*, i, 159; Burian, *Geog. Gr.*, i,

205; Vischer, *Erinnerungen*, 590; Baedeker, *Greece*, 194; *PAE* 1907, 108; Guide Bleu 239 f.; Arias 64. An experimental excavation, in the orchestra and below, by the Greek Archaeological Society in 1907 revealed nothing. Photograph PLATE 26.

<sup>51</sup> *IG* VII 3409.



As suggested in *BSA* XLIII, 164, this proscenium, which has left no traces, must have been of wood.

*Rows.* There are sixteen or seventeen rows, the seats being entirely cut out of the rock, and the curvature being much slighter than in most theatres, to such an extent that from fifty yards away the tiers appear to be rectilinear. Some 2 m. from the west wing, however, they suddenly take on a far more pronounced bend.<sup>52</sup> An examination of the rock surface revealed that in all likelihood no artificial embankment existed on the wings. The slight elevation visible in the distance in *PLATE 2b* must have been used to afford, by means of a slope, access to the four upper rows, which are cut off from the remaining seats by the high wall of rock.<sup>53</sup> Leake and Ulrichs, *loc. cit.*, claim that the sides were originally covered with earth and masonry, i.e., in a manner similar to Argos. But the Greek excavations in 1907 failed to reveal the slightest trace of masonry.

*Divisions.* Leake speaks of two *diazomata*, and presumably refers to the high rock wall as one and the flat space twelve rows below it as the second. Arias first says that there are eleven rows below the *diazoma*, thus calling the high wall a *diazoma*; and then asserts that the *diazoma* is 1.20 m. wide, which only applies to the flat space below. In reality neither of these is a *diazoma*. The purpose of the upper wall is to permit the cutting of the four top rows without undue excavation into the steep hill of rock. The purpose of the lower space cannot have been to serve as *diazoma*, for it is only just above the bottom of the whole cavea, and it narrows considerably towards the wings, finally disappearing altogether (see *PLATE 2b*). It more probably served as the base for a wooden *prohedria* bench. The tier above it is 68 cms. higher; this would easily leave a clear view for the spectators behind. The steps in front of the *prohedria* base are at least partly<sup>54</sup> rectilinear, in distinction to those behind it, and obviously did not serve as seats.

*Orchestra.* The rock ends abruptly two steps below this *prohedria*, and there is a drop of nearly 80 cms. even to the present level of the earth, which slopes downwards away from the cavea. The original orchestra level must also have had a small slope, and may have been approached from the *prohedria* by one or two wooden steps connected with the existing rock-cut steps.

*Measurements.* The seats are unusually narrow and most uncomfortable. Average height 34 cms., average width only 41 cms. It may be suspected that whenever possible the audience sat only in alternate rows, for the amount of footspace is extremely small. The greatest width of the *prohedria* base is 1.78 m. Behind this are eleven rows, all of varying measurements, the

<sup>52</sup> This peculiarity, which has not been reported in any account, is shown in *PLATE 2b*.

taken from a point immediately above it.

<sup>54</sup> The latter is visible in the photograph, which was

The first step is completely rectilinear; the second more curved.

average already given. The eleventh row has normal width, but is backed immediately by the rock wall, 1.60 m. high. Behind this are four roughly carved rows, with similar measurements, which may be a later addition. Above them is a second wall about 2.30 m. high. Even higher than this an unskilled workman has tried to work the rock, as at Argos, but without much success. The inscription ΑΠΟΛΛΩΝΟΣ ΔΑΦΝΑΦΟΡΙΩ ΑΡΤΑΜΙΔΟΣ ΣΟΛΛΙΝΑΣ,<sup>55</sup> seen by Leake and others, cannot now be made out.

*Use as theatre and date.* The inscription IG VII 3408 mentions men's choruses. Arias tries to connect with the theatre a statement by Plutarch<sup>56</sup> about worship of Dionysus by the women of Chaironeia; but this cannot be supported. The inscription mentioned above, p. 35, speaks of a proscenium, so dramatic performances must have taken place; and judging from the absence of stairways and the awkwardness of the seating, we may perhaps ascribe the cavea to the late fifth century B.C., the upper rows being added at some period in the fourth (?) century.

#### DELPHI 57

*Situation.* This small theatre, which faces S.E., lies in the top west corner of the sanctuary, one of the most pleasant situations in the whole of Delphi.

*Planning.* There are seven *kerkides*, with eight stairways.<sup>58</sup> The most curious feature, reminiscent of New Pleuron, is the use of the temenos wall, which is rectilinear, as the S.W. side *analemma*. In order to correspond with this, the opposite (N.E.) wall has also been made straight; but the rear wall is curved, following the line of the seats.

*Details.* There is no *prohedria*, and the orchestra and *parodoi* are covered with Roman paving. The seats, however, are of the standard Greek type, and must surely be Hellenistic.<sup>59</sup> There are thirty-six rows, with a *diazoma* above the twenty-ninth. Leading out from each side of the *diazoma* is a doorway; one of these goes through the temenos wall. The shape of the bottom row is circular (cf. BSA XLIII, 140, fig. 5a), and the cavea encloses an area of nearly 185°. The inclination is of necessity steep, owing to its situation at the top of the temenos; but no rock is visible. The stairways are subdivided in the *epitheatron*.

<sup>55</sup> IG VII 3407, where we are told: 'Lollingius his frustra quaerivit'. The Guide Bleu says some letters are visible, but nothing could be seen on our visit.

<sup>56</sup> Quaest. Symp. 717.

<sup>57</sup> Porntow in *Delphica*, III, 77; Arias 58; N.

Valmin, *Fouilles de Delphes*, III, vi, 1 ff. Plan in RE Suppl. Bd. IV, 1199. Photograph PLATE 3a.

<sup>58</sup> Not six, as Arias says.

<sup>59</sup> The inscriptions on them are, however, of the Roman period (cf. BSA XLIII, 184).

## LARISSA ■

*Situation.* In the middle of the town, on a small eminence.

*Remains.* Only a few rows of grey limestone seating, and a possible fragment of the proscenium. The seats are remarkable in not having a fillet, the absence of such being rare before Roman times except in rock-cut theatres. They are mostly very gently curved or even straight; they may come, therefore, from the wing of the cavea.

DEMETRIAS <sup>61</sup>

*Situation.* Facing east, near the gulf of Pagasai.

*Remains.* Very few, as at Larissa. The stones visible at ground level on the south side have been wrongly taken as a *parodos* wall. They are too low for this, and seem rather to be a Roman passage made out of re-used blocks.

MYCENAE <sup>62</sup>

*Situation.* The whole theatre is situated on the mound formed by the 'Tomb of Clytaemnestra', and on both sides of its *dromos*, originally without a break. It follows that the tomb must have been completely covered and unknown in classical and later times. The cavea faces S.W. across the Argive plain.

*Remains.* The only substantial extant remains consist of the *prohedria* benches, which have been described in *BSA* XLIII, 175, and slight traces of the *skene* foundations, lower down on the sides of the *dromos*. Bulle (*op. cit.*, 259) asserts that there were no *parodoi*, but this is very questionable. Between the benches are to be seen the openings of two staircases (not four, as Arias says). Of the rest of the cavea nothing remains, and it seems most likely that it was composed merely of wooden benches in roughly semi-circular arrangement. Wace, *loc. cit.*, mentions that some round stones are *in situ*, which could have served as bases for wooden uprights.

*Epigraphical.* Two inscriptions relating to Mycenae have been preserved: (a) *BSA* XXV, 409; (b) *IG* IV 497, dating to 197-5 B.C. Both mention the celebration of Dionysia, and the former contains the words:

ΔΕΔΟΧΘΑΙ ΤΩΙ [ΚΟΙΝ]ΩΙ ΤΩΝ ΜΥΚΑΝΕΩΝ ΔΑΜΟΚΛΕΙΔΑΝ ΘΕΟΔΩΡΟΥ  
ΛΑΚΕΔΑΙΜΟΝΙΟΝ ΑΥΤΟΝ ΚΑΙ ΕΓΓΟΝΟΝΣ ΑΥΤΟΥ ΚΑΛΙΣΘΑ[Ι ΕΣ ΠΡΟ]ΕΔΡΙΑΝ  
ΤΟΙΣ ΔΙΟΝΥΣΙΟΙΣ. . . .

<sup>61</sup> Arvanitopoulos, *ADelt* 1915, *παράγρ.* 88; F. Stählin, *Das Hellenische Thesalonien*, 97; Arias 39. Photograph PLATE 3a.

<sup>62</sup> F. Stählin (and others), *Pagasai und Demetrias*, 23 and 119; *id.*, *Das Hellenische Thesalonien*, 73; Bulle 287;

*PAE* 1912, 134.

<sup>62</sup> Boëthius, *BSA* XXV, 418; Arias 86; Bulle 259; A. J. B. Wace, *Mycenae*, 38, figs. 54a, b. Excavated by the British School at Athens, and further cleared in 1939. Photograph by F. H. Stubbings, PLATE 2f.

This decree would presumably give Damokleidas and his sons one of the existing *prohedria* benches. The award is specially qualified so as to cover the use of the benches only at the Dionysia.

*Date.* As the other inscription mentioned above is of 197-5 B.C., the theatre is likely to have been built in the second half of the third century. The town was not flourishing again much earlier than this, and the probable use of wood in the cavea does not prove an earlier date, but merely lack of money or materials.

# ARGOS ■

*Note on excavations.* These have been carried out in a most haphazard manner, and have not even yet been completed, especially the clearing of the stage buildings and *parodoi*. The rock-cut seats, on the other hand, have always been visible except for the bottom rows, and are commented on by Leake,<sup>64</sup> the authors of the *Expédition de la Morée*<sup>65</sup> and others, who have contributed little to our knowledge of the theatre. A complete account is still lacking, and not only are the excavation reports unsatisfactory, but the majority of text-books on the Greek theatre do not mention Argos at all.

*Situation.* The cavea faces E.N.E., and the greater part of it is cut out of the rock at the foot of the hill Larisa, which dominates the town. The theatre was nearer to the centre of the ancient settlement than to that of the modern. To the south of the cavea are about thirty rectilinear rock-cut tiers,<sup>66</sup> which have often mistakenly been called the 'small theatre'.<sup>67</sup> This term is appropriate neither to the whole nor to the very small section which seems to have been rounded at a later date. The rectilinear tiers are probably of earlier cutting than the cavea of the theatre, as they interrupt the natural circle of the latter. Kophiniotis ■ thinks they constitute an earlier attempt at a theatre, suddenly abandoned in favour of the present site. He does not mention, however, that the tiers are rectilinear; and if both structures were intended to be theatre buildings, and were constructed at the same period, it is unlikely that one would have been made rectilinear and the other curved. It seems more reasonable to connect the rectilinear tiers with the κρηπίδιον

<sup>64</sup> Curtius, *Peloponnesos*, ii, 352. Excavation report in *AM* XVI, 363 (Kophiniotis). A notice in *Adelt* 1891, 86 mentions excavations by him in 1890, and promises further reports, but none exist. Other refs.: E. A. Gardner (and others), *The Excavations at Megalopolis*, 35, 42; Kophiniotis, *ἱεροπλῆ τοῦ Ἀργεῶς*, 86; Volkgraf, *Nieuwe Opgroeven te Argos* (pamphlet, 1931); *Id.*, *BCH* XLV, 223; best plan in Guide Bleu 387. Photographs PLATE 36-c.

<sup>65</sup> *Travels in the Morea*, ii, 396.

<sup>66</sup> *Id.*, fig. 58.

<sup>67</sup> See PLATE 36; full description and measurements in W. A. McDonald, *The Political Meeting*

*Places of the Greeks* (Baltimore, 1943), 80.

<sup>68</sup> E.g. Guide Bleu, *loc. cit.*; *Expédition de la Morée*, ii, 91, which goes so far as to identify some foundations with its 'proscenium'. Anti, in *Dioniso* XII, 70 (review of my article in *BSA* XLIII); adduces it as supporting his theory of the trapezoidal origin of the cavea; but if, as argued below, it was not a theatre, it is of no value as a parallel.

<sup>69</sup> *ἱεροπλῆ τοῦ Ἀργεῶς*. McDonald, *op. cit.* 84, considers that they were either an earlier theatre or a *bouleuterion* or used for both purposes in the fifth century.

mentioned by Pausanias.<sup>69</sup> The small semicircle hollowed out later in the rock-cut tiers was perhaps intended as an *odeion* or *bouleuterion*. Between this and the theatre numerous stairs and passages have been cut.

*Planning.* There are four *kerkides*, with five stairways. These are not quite equally spaced, but the difference is not as great as is shown in Wieseler's diagram.<sup>70</sup> Possibly the stairs are of later origin than the remainder of the cavea, and were made in a haphazard manner.

*Diazomata.* There are two *diazomata*, both cut quite square into the rock. FIGS. 8, 9 reproduce sectional drawings by R. W. Schultz, who, however,

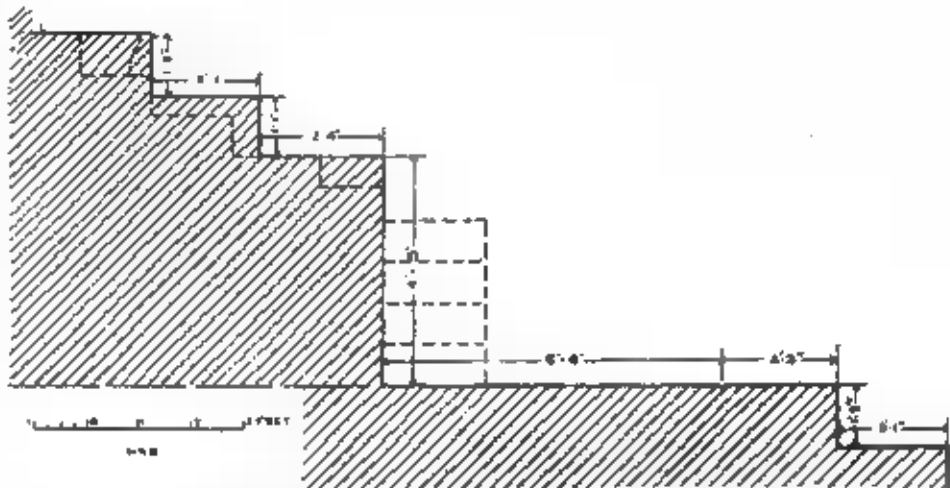


FIG. 8.—ARGOS. SECTION THROUGH UPPER DIAZOMA. From E. A. Gardner (and others), *The Excavations at Megalopolis*, 42, fig. 30 (plan by Schultz).

The measurements given, from top left to bottom right, are as follows in centimetres: 35.5, 64, 33.5, 71, 135, 198, 69, 35.5, 64.

omits the deep water-channel which runs along the 'lower *diazoma*'. This channel, which may have been covered with marble slabs at intervals, is 29 cms. wide and 24 cms. deep. As it occupies practically the middle of this narrow '*diazoma*', it is more correct to avoid altogether the description '*diazoma*' for the latter, since it was evidently not intended as a passage for the spectators, but rather as a gap between two tiers for collecting water which trickled down from the upper seats. The upper *diazoma* is 1.35 m. high and 1.98 m. (or with seat 2.67 m.) wide. It must have contained steps, placed sideways, giving access to the *epitheatron*.

*Rows.* The rows at the top become less and less well defined, so that an exact computation is difficult: there were, however, about eighty-four rows

<sup>69</sup> II, 20, 7. See Pausanias, ed. Hitzig and Blümner, I, 582. Vischer and others do not think this likely

from the text. McDonald does not discuss the point. <sup>70</sup> *Griechische Theatergebäude* (1874), pl. I, 22.



EPIDAUROS <sup>75</sup>

*Situation.* This beautiful and well preserved theatre lies in a natural hollow of Mount Kynortion, and faces N.N.W. towards the sanctuary and the distant Arachnaion. Pausanias <sup>76</sup> visited the theatre and highly praised it for its ἀπουσία, or perfect proportions. It has been described as the first theatre designed by a real architect, and as having imposed a canon for all Hellenistic theatres. This, however, is not exactly true. It was preceded by Megalopolis and other well planned theatres; while as to its influence upon other theatres, the stage buildings are without any exact parallel,<sup>77</sup> and the auditorium was in many ways more of an experiment than an example to be copied. Nevertheless the proportions are strikingly perfect even to-day, and the acoustics <sup>78</sup> are probably not surpassed by any other ancient theatre.

*Planning.* The orchestra is defined by a thin circle of white marble slabs,<sup>79</sup> and the centre indicated by a small round marble projection. This was merely for building and measuring purposes. The extension of the cavea beyond the semicircle is carried out, perhaps for the first time, according to Vitruvius' scheme: the lateral *kerkides* are described from centres about 3 m. more distant than the orchestra centre (see BSA XLIII, 140, fig. 5d). As a result, the passage between orchestra and *prohedria* broadens from 2.10 m. to 2.85 m. at each wing.

There are twelve *kerkides* (a number not paralleled in mainland Greece) and thirteen stairways, subdivided above the *diazoma*, which is placed exceptionally high. In the *epitheatron* the two lateral *kerkides* were omitted, leaving twenty-two in all. There are fifty-five rows, with the *diazoma* above the thirty-fourth. These include three rows of *prohedria* benches, the first, thirty-fourth and thirty-fifth. It is incorrect to speak of a 'second *diazoma*' at the top.<sup>80</sup> This is merely a narrow passage (a width of 62 cms. paved, and part unpaved) between the top row and the low circular *analemma*. Such a passage is not known elsewhere in Greek theatres, but in most cases the summit is too ruinous to permit observation. Vitruvius,<sup>81</sup> in writing that colonnades are desirable above theatres, is thinking of late Asiatic and Roman caveas; but if, as has been suggested,<sup>82</sup> the πεπλοσός mentioned in the Delos inscriptions referred to a passage above the top row, we have a close parallel.

<sup>75</sup> Kavvadias, PAE 1881-2, 1900, 1903 (full refs. in Arias and Bulle); Id., *Fouilles d'Épidaure*, I, 10; Id., To ἔργον Ἀρχαίου, 75; Defrasse and Lechat, *Épidaure*, 193; D-R 120; Bieber, H.T., 132; Bulle 167; Arias 88. Excavated by the Greek Archaeological Society in 1881. Photographs, PLATES 5b, 4a.

<sup>76</sup> II, 27, 5.

<sup>77</sup> Bulle 167.

<sup>78</sup> Cf. BSA XLIV, 328.

<sup>79</sup> See PLATE 5b. The proscenium, as in some other theatres, occupies exactly the width of the orchestra circle.

<sup>80</sup> As does Arias (88).

<sup>81</sup> V, 9, 1.

<sup>82</sup> Vallois, *L'Architecture hellénique et hellénistique à Delos*, 221.

*Analemmata and entrances.* The two *parodoi* are of the usual design. The west *parodos* door has been correctly reconstructed, mostly from the fallen blocks. It forms a direct link between the cavea and the *skene*; for on the one hand it is of exactly the same height as the proscenium, on the other<sup>83</sup> the inner edge of its cornice coincides with the coping of the *parodos* wall. The coping and part of the wall itself have been restored, the restored coping being plainer than the original. The *parodos* walls, with continuous coping-stones having an upward slope, proceeded in straight lines as far as the *diazoma*, where they turned inwards at right angles,<sup>84</sup> as the lateral *kerkides* were omitted above it; they then continued upwards in their original direction. The circular *analemma* was scarcely needed, as the natural slope of the hill coincided with that of the cavea.<sup>85</sup> A low wall of grey tufa, now in ruins, was seen standing, about 1668, by Desmouceaux.<sup>86</sup> The *parodos* walls are also of solid grey tufa.

*Seats.* In the lower part of the cavea, PQ<sup>87</sup> = 75-76; AB 34.2 on average; BC, DE, 3; AL 7; NE approx. 35; AG approx. 93; FG 9. Fillet projection, 7.5-8.5 cms. Nearly all authorities<sup>88</sup> give AB (width of seat) as 35 cms., and imply that this is constant throughout. But measurements accurately taken in one *kerkis* show the following discrepancies:<sup>89</sup>

AB: row 2, 35 cms. (average); row 3, 34.8; row 4, 33.6-33.9; row 5, 34.1-34.8; row 6, 34.5; row 7, 34; row 8, 33.5; row 9, 33.6; row 10, 34-34.5; row 33, 34.9. Average for rows 2-9, 34.2 cms.

The AB measurements afford the only really exact results, as others depend on the relative position of the rows, and this has changed slightly even in the well preserved cavea of Epidauros.

Clearly no very great degree of accuracy was aimed at, a rough approximation to 34.2 cms. being considered sufficient. Writers on the theatre have evidently measured only the first rows above and below the central *prohedria* and above the lower. Fossum<sup>90</sup> takes the measurement of 35 cms., which he says represents both the height and width of the seats, and claims that the

<sup>83</sup> See PLATE 56.

<sup>84</sup> The bend is visible in PLATE 56.

<sup>85</sup> The natural slope was semicircular, but its flanks did not extend very high. This was the real reason for the absence of lateral *kerkides* above the *diazoma*. The reasons given by Kavvadias, *Τὸ ἱερὸν Ἀοιδιῶν*, 78, are (a) a desire to avoid blocking the upper exits; (b) the restricted view of the stage which would be obtained from the upper seats. Upper exits have been deduced, at the wings of the *diazoma*, by the discovery of certain coping-stones (cf. Deffrasse 198, 210, pls. III, IA); but exits would have been equally possible if an artificial embankment had permitted an extension of the *epithatron*. As to the

restriction of the spectators' view, the angle relative to the stage would not have been different from that in the lower seats close to the walls.

<sup>86</sup> Cornille Le Bruyn, *Voyage au Levant*, 1725 ed., vol. V, quoted by Deffrasse 6 ff. (cf. *ibid.*, 198, n. 2). The accumulation of earth over the cavea, removed in 1882, did not exist before the eighteenth century.

<sup>87</sup> See no. 1 above. Dimensions in centimetres.

<sup>88</sup> Including Fiechter, *A III*, 54.

<sup>89</sup> The numbering of the rows includes rows of *prohedria* benches. Row 33 is that below the central benches.

<sup>90</sup> *AJA XXX*, 74.



whole theatre was laid out in multiples of 35 cms. and 3.50 m. The figures given above tend to refute this suggestion, which in any case cannot apply to PQ. There is no evidence that 35 cms. represented a 'round number' in Greek measurements. Nor is it likely that the position of the *diazoma* was accurately fixed beforehand. It must simply have been fixed when the architect considered a sufficient height had been reached in the building of the tiers.

*Epitheatron.* Here the measurements are different. PQ, as before, 75; AL 7; but AB 36.5; NE 37-40. As the height (NE) is 35 below the *diazoma* and 37-40 above it,<sup>91</sup> the precepts of Vitruvius in V, 3, 4 are not adhered to. By this means the upper spectators had a better view, without the cavea appearing unduly steep as at Chaironeia. The difference in inclination is not perceptible from the orchestra.

*Stairs.* Of normal type, two steps to each row except in rows 1-4, where there is virtually only one to each row. Width 74 cms.

*Prohedria.* See BSA XLIII, 170 f.

*Diazoma.* The thirty-fourth row consists of twelve *prohedria* benches. Above these is the *diazoma*, paved in smooth grey limestone blocks like the rest of the cavea, and having a width of 1.90-2 m.<sup>92</sup> The *diazoma* wall is composed of plinths 24 cms. high, orthostates 90 cms. high and cornice 22 cms., making a total of 1.36 m. The cornice is still visible<sup>93</sup> but poorly preserved. Its upper surface forms a footrest for the top row of *prohedria* benches, twenty-two in number. Behind these is a raised gangway. This does not lie on the same level as the footrest of the thirty-sixth row, which is elevated like that of the second row at Sparta.<sup>94</sup> The footrest actually has lion's-claw end-pieces at each stairway, an ornamentation unparalleled in an otherwise ordinary row of seats.<sup>95</sup> The stairs immediately above the *diazoma* are, as usual, steeper.

*Use of theatre.* Only two inscriptions ■ contain mention of performances in the theatre, and two comic actors only are named in these. Judging by the absence of tragedians in the inscriptions, and from the discovery that the proscenium is of later date than the original scheme of Polykleitos (see below), Bulle denies that tragic performances ever took place at Epidauros. This, as Arias (95) points out, is too sweeping a statement. The pilgrimages to the shrine of Asklepios were imbued with a deeply religious feeling, and it is surely appropriate to connect with them the representation of tragedies even more than of comedies. The seating capacity of the cavea, calculated at 40 cms. per person, is about fourteen thousand two hundred.

<sup>91</sup> Or 3 cms. more in each case, including foot-space.

<sup>92</sup> The fig. in Deffosse 199 (a) is not really to scale, as it implies a width of only 1.80 m.

<sup>93</sup> See PLATE 40.

<sup>94</sup> See BSA XLIII, 173, fig. 28.

<sup>95</sup> See PLATE 40. For examples of lion-legged thrones see C. Seltman, *JHS* LXVII, 24.

<sup>96</sup> References in Bulle, 174.

*Date.* The whole of the auditorium was constructed by Polykleitos, the architect of the *tholos*, about 340 B.C. The *parodos* doors, on the other hand, are certainly later in their present form,<sup>97</sup> though they may merely have replaced the original less ornate entrances. These may well have had a lintel of the same height, as they seem to have been situated at a point where the first floor of the *skene* and the *parodos* wall were of equal height. In any case, the cavea and stage buildings were certainly designed as a unity.

# MANTINEIA<sup>98</sup>

*Situation.* In the middle of the fortified town, near the agora and temples. The cavea faces due east, and is situated on absolutely level ground. This

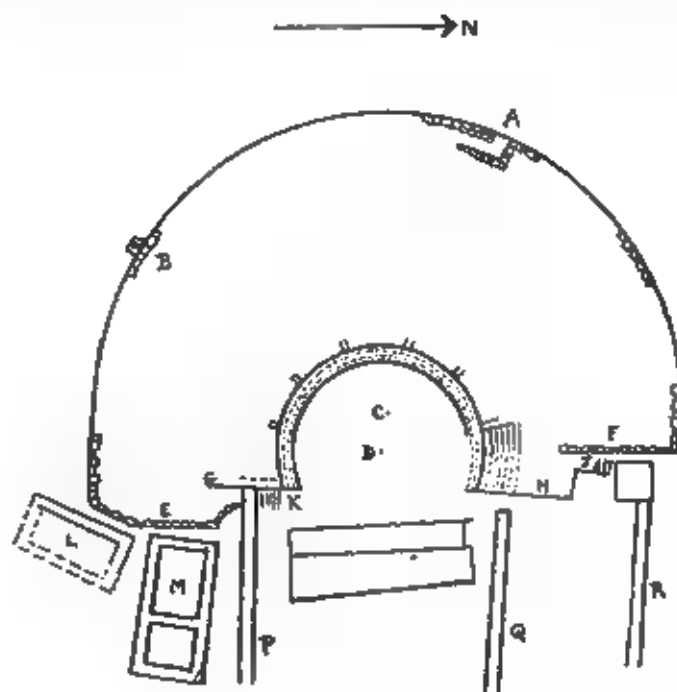


FIG. 10.—MANTINEIA. PLAN OF THE THEATRE AND SURROUNDING BUILDINGS. After Fougères, *op. cit.*, 167, fig. 37.

A West stairway. B S.W. stairway. C Centre of analemma. D Centre of orchestra. E, F Old walls. G, H Repaired walls. J N.E. stairway. K S.E. stairway. L, M Temples. N South roadway. Q North roadway. R Old portico.

necessitates an artificial embankment (as at Eretria), which has been partly preserved.

<sup>97</sup> Bulle, 168.

<sup>98</sup> Fougères, *Mantinde et l'Arcadie Orientale*, 165;

Bulle, 248. Excavated by the French School.

Photograph PLATE 5c.

*Planning.* There are seven *kerkides*, with eight stairways originally. The *parodos* walls, however, had evidently collapsed towards the orchestra, and were repaired hurriedly from the old materials, but in a different orientation, so that their course is in places as much as 5 m. from the old walls. This has resulted in the lateral stairways being cut off,<sup>99</sup> though there are exterior approaches and staircases. It has also led to the stage buildings being at an even more divergent angle from the cavea than they were before. But in spite of the general lack of planning, the theatre fits in well with the remaining public buildings.

*Entrances.* These are most plentiful. The two *parodoi* lead forwards, rather than sideways, towards the agora. A staircase leads into the cavea outside the repaired south *parodos* wall; and the north *parodos* also has one at a higher level. In addition, there are two rear staircases, the west one being particularly well preserved up to a height of 3.62 m., above which the artificial embankment does not now reach. Fougères, *op. cit.*, 166 considers the upper section to have been three times as high, and to have been composed, like the city walls, of brick. He also thinks<sup>100</sup> of the west staircase as turning inwards and piercing through to the *diazoma* by means of an arched passage. But (a) such an arch would have left traces; (b) no arched passages leading to the centre of a cavea are known in Greek theatres; (c) it is doubtful whether there was a *diazoma* in this small cavea. Fourteen steps are still extant in this west staircase, which is built of fine polygonal masonry.

*Rows.* What appear to be the bottom three tiers are in reality merely steps, perhaps intended as seats only when they were much needed. They have a height of 40 cms. and a width of 50, but are cut square without fillets. Moreover the inscription mentioned in BSA XLIII, 184, which may indicate a place reservation, comes from one of the rows above, not from these 'steps'. Thus the first row, which has a fillet of the normal type, is elevated above the orchestra.<sup>101</sup> In this case the front row was not built up above the orchestra in order to secure a better view of the stage, for the stage was erected after the cavea.<sup>102</sup>

*Seats.* These are of the usual type, and are partly of marble, partly of white limestone. Measurements (*cf.* FIG. 1): PQ 66.5, AB 31.5, ND 30.5, AL 7 cms. There is no *prohedria*. The rows above the first are very poorly preserved.

*Date.* The cavea may have been planned soon after the fortification of the city in 371 B.C. Bulle (248) remarks that the *analemma* is in the same polygonal style as the city walls, and suggests as its date the middle of the

<sup>99</sup> On the north side the old *parodos* wall must have had a bend in order to include the last *kerkis*.

<sup>100</sup> *Op. cit.*, 169.

<sup>101</sup> See PLATE 5c.

<sup>102</sup> Bulle 248.

fourth century. Then came the *skene*; after this the alterations in the *parodos* walls, and finally the addition of the proscenium.

### MEGALOPOLIS <sup>103</sup>

*Situation.* Although there is no evidence as to the disposition of its streets and bridges,<sup>104</sup> there is no doubt that the city of Megalopolis was designed to show some symmetry and correspondence. Lying on both banks of the river Helisson, it had an agora on the north side of the river and the Thersilion (assembly hall for the Ten Thousand) on the south side almost immediately opposite. At the same time the theatre cavea was planned, as it takes advantage of a natural hollow (which had, however, to be built up artificially on both wings) and lies immediately adjacent to the Thersilion, in such a manner as almost to form one building, the two having the same orientation. Thus the theatre auditorium faces approximately north, and has an excellent view over the river and hills beyond.

*Planning.* The orchestra forms a true circle, and the cavea is divided into nine *kerkides* with ten stairways, which converge upon the centre of the orchestra. The seats are not preserved above the ninth row, but the shape of the cavea is well retained. There must have been about sixty rows in all, subdivided by two *diazomata*.

*Entrances.* Apart from one *parodos* entrance (there were two until the *skenotheke* was constructed in the west *parodos*), Gardner<sup>105</sup> claimed to have discovered traces of an upper entrance, through gaps in the *parodos* walls and by means of steps or slopes, communicating with the upper part of the cavea. It is at this point that he places the lower *diazoma*, which has otherwise left no trace of its course. Possibly these two upper entrances were made after the erection of the *skenotheke* had obstructed one of the *parodoi*.

*Seats.* See BSA XLIII, 160 f. Some economy is achieved by (a) the use of inferior material for the footrest, (b) the thinness of the footrest slabs, which have an average height of only 15 cms. The seating in the side *kerkides* is narrower than elsewhere; perhaps it was converted from wood to stone at a later date.

*Stairs.* There are marble stairs of the usual type, two to each row of seats. Width 80 cms.

*Prohedria.* See BSA XLIII, 168 f. Behind the *prohedria* runs a passage

<sup>103</sup> E. A. Gardner (and others), *The Excavations at Megalopolis*; D-R 133; Pausanias, ed. Frazer, iv, 339; Bulle 97; Fiechter, *Megalopolis*; Arias 100 (good photographs). Excavated by the British School, 1890-1. During my visit (Dec. 1938) much of the theatre was under water.

<sup>104</sup> For this reason it was not included in the note on theatres and town-planning, BSA XLIII, 138 f.; it should, however, be taken into account for the reasons given below.

<sup>105</sup> *Op. cit.*, ch. IV.

91.5 cms. wide. It slopes down towards the orchestra, and a channel to draw off the water has been roughly carved in it.

*Date of cavea.* Between 365 and 355 B.C. in all probability, soon after the foundation of the city.<sup>106</sup> The dedication inscription on the *prohedria* is of importance in dating (see *BSA* XLIII, 169).

*Use as theatre.* The question has been discussed whether the cavea was originally used for theatrical purposes. The fixed *proscenium* at the back<sup>107</sup> of the Thersilion is of much later date. Before it was erected, the Thersilion itself acted as a background. A *skenotheke*, or store-house, occupies the position of the west *parodos*; this could store a large quantity of scenery, reaching to the height of the Thersilion columns. It may have been used for a movable stage rolled across in front of the orchestra when required. But there is evidence that the *skenotheke* was constructed later than the cavea and *parodoi*, (a) on archaeological grounds, as the *parodos* wall was covered up at a later period, (b) because roof-tiles preserved from the store-house, with the inscription ΣΚΑΝΟΘΗΚΑΣ, date from the third century B.C. or later, and Bulle (99) argues that inscribed tiles would not have been used for repairs. From this dating it is usually argued that no dramatic performances took place before the introduction of the *skenotheke*. But it is at least possible that for the simple production of classical tragedy no scenery or elaborate stage was required, and that only a low wooden platform was used in front of the Thersilion, which with its wide door and lofty columns could be taken as a palace.

#### SPARTA<sup>108</sup>

*Situation.* The theatre is situated on the south side of the acropolis hill, facing approximately south. The upper part of the cavea has a fine view over Taygetos and the Eurotas.

*Planning.* The cavea is of a good size, and is divided by ten stairways into nine *kerkides*, which are subdivided above the *diazoma*. The positions of the stairways have not been accurately determined owing to the great deposit of earth and the ruinous state of the cavea, but it is clear that, in its present condition, the outside *kerkides* are narrower than the others. The present *parodos* walls form an angle of 181°, and would enclose rather more than half the orchestra if prolonged.<sup>109</sup> Consequently the lateral stairways are almost parallel to those adjacent.

<sup>106</sup> Probably the invasion by the Spartans in 352 B.C. would not have caused the destruction of the cavea.

<sup>107</sup> Its front faced towards the river.

<sup>108</sup> Woodward, *BSA* XXVI, 129, pls. XIV, XV; XXVII, 175; XXVIII, 3; Bulle, *Das Theater zu*

*Sparta*; Arias 99. Excavated by the British School in 1924. Photograph PLATE 3d.

<sup>109</sup> Woodward gives 179°, but from the point of view of the cavea this means 181°, as an obtuse angle is formed.

*Entrances etc.* It can be estimated that there is space for thirty-one rows of seats below the *diazoma*. Nothing of the marble facing of the latter remains, only thick slabs of poros which formed its foundation. The present *parodos* walls turn outwards at the level of the *diazoma*<sup>110</sup> and then continue in their former direction. The enlarged space thus obtained is used on the east to provide a stairway from the *parodos* to the *diazoma*; but there is none on the west, for the *parodos* was blocked by the *skenotheke* (dating from the time of Augustus, with rails for a movable stage), and a *nymphæum*.

*Seats.* These are of the normal type, and consist of white marble blocks, mostly resting on foundations of poros. The bottom six rows have hollowed seats, which can be seen in PLATE 3d. A feature unparalleled in Greece is the shape of the fillet on the fronts: see BSA XLIII, 173, fig. 28, where measurements are given.

*Stairs.* The steps consist of marble blocks, two to each row, on a foundation of poros. Their width is 95 cms., except the lateral stairways, which are 1.05 m. wide.

*Prohedria.* The excavated benches have been described in BSA XLIII, 173. The two lateral benches were roughly cut off, on the side of the stage, to make room for the lateral stairway exits and the short stairway leading up to the Roman *pulpitum*. If they had originally been of the same length as the other benches, they would have obstructed the lateral stairways in their present position; see FIG. II.

*Orientation.* The fragment of proscenium (E in FIG. II), running at an angle of 11° from the earliest stage buildings on the present orientation (D), has been shown<sup>110a</sup> to be earlier than any other remains of the stage buildings. Since the stage buildings of the period of this proscenium were differently orientated, it seems likely that the cavea was also.

*Date of cavea.* Woodward, Bulle and Arias all date the cavea to the first century A.D. The reasons given for this theory are as follows:<sup>111</sup> (a) the cavea is considered to be of the same period as the *parodos* walls and *skenotheke*; (b) a Roman embankment wall<sup>112</sup> was found near the top of the cavea, supporting a clay embankment; (c) very few pre-Roman coins were discovered; (d) a series of square holes for awnings is a Roman feature. The absence of Hellenistic coins is certainly an argument for a late date, since a fair number have been found on other sites in Sparta; but the remainder of the data proves only that the theatre was often reconstructed in Roman times. There are many points, on the other hand, suggesting an earlier

<sup>110</sup> See FIG. II.

<sup>110a</sup> BSA XXVII, 192, 204; XXX, 152. For some problems raised by the altered orientation see the next paragraph.

E

<sup>111</sup> Summary in Bulle, *Das Theater zu Sparta*, 15, 49; Woodward, *loc. cit.* See, however, note 114 below.

<sup>112</sup> BSA XXVI, 153.

date. (1) The angle at which the S.E. water-channel runs out may indicate that the original seating on the wings was cut back when the present retaining walls were built. (2) The two lateral *kerkides* are narrower than the rest. (3) The lateral stairways are wider than the rest, and almost parallel with the stairways next to them. (4) The end *prohedria* benches have been chopped off. (5) It seems that the orientation of part of the lower seating near the east *parodos*<sup>112</sup> has been altered. (6) The seats, apart from the unusual concave fronts, mentioned above, in the first six rows,<sup>113</sup> appear to be of

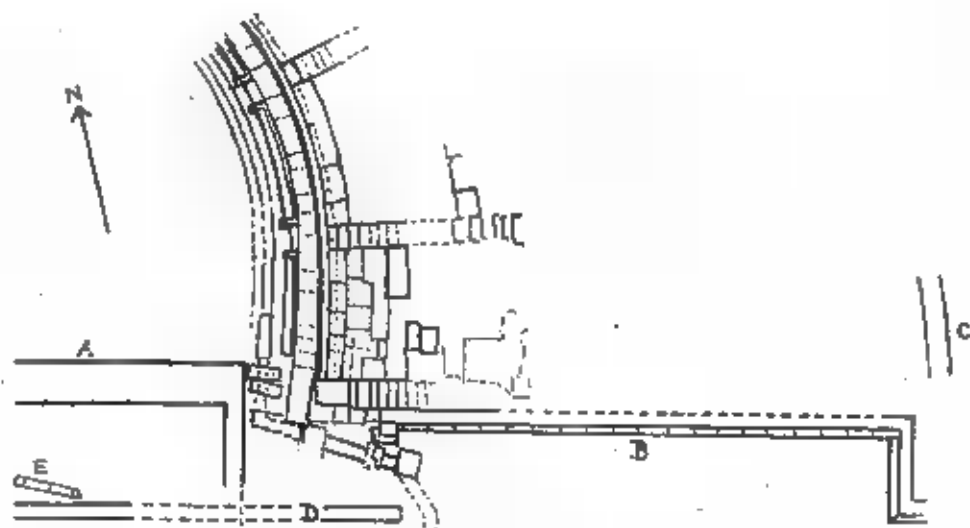


FIG. 11.—SPARTA. PLAN OF THE EAST PARODOS AND ADJACENT PART OF THE CAVEA.  
After *BSA* XXVI, pl. XV.

A Roman *pulpitum*. B Inscribed wall. C Line of *diazoma*. D Front wall of earliest stage buildings on present orientation (C in *BSA* XXVII, pl. XXVII). E Fragment of Hellenistic proscenium ('Early wall' in *BSA* XXVII, pl. XXVII); see p. 49 above.

Greek rather than Roman type; e.g., the footrest is at a different level from the seat in front of it. (7) The *prohedria* is very similar to those at Megalopolis, Epidauros and Sikyon.

There may then have been extensive changes during the Roman period, by which the cavea was not demolished but remodelled and perhaps enlarged.<sup>114</sup> Originally the *parodos* walls must have formed a more obtuse angle, and the lateral *kerkides* and benches must have extended to their full

<sup>112</sup> *BSA* XXVI, pl. XV; cf. fig. 11 above.

<sup>113</sup> It is uncertain whether the absence of hollowing above row 6 has any chronological significance.

<sup>114</sup> Mr. Woodward suggests in a letter to me that the earlier cavea may have been much smaller, so that the massive retaining walls at its outer ends

would not have been necessary; and wonders if the altered layout was due to the decision to build a *skenothekē*, for which there would have been no room in the earlier west *parodos*. Bulle, *Das Theater zu Sparta*, 95, postulates a small cavea with earthen or wooden seats.

width. If we assume that the Hellenistic <sup>115</sup> *proscenium* (E in fig. 11) extended to 15–20 m., it is difficult to see how the west lateral *prohedria* and seating can originally have lain as far south as their present position.<sup>115a</sup> It is, however, possible that the *prohedria* and the lower rows of the *cavea* are of Hellenistic date but were shifted and re-orientated in about the first century A.D.

# ELIS <sup>116</sup>

*Situation.* To the N.E. of the agora; the *cavea* faced N.N.W.

*Remains.* The whole of the stage building foundations and *parodoi* were cleared by the excavators. The *parodoi* converge towards the outside, and are bounded by well-built limestone walls.

*Cavea.* No trace of a stone *cavea* or orchestra was found, although extensive trial trenches were dug. It should therefore be assumed that a stone *cavea* never existed even in late Hellenistic times. Nor is this fact very surprising: for Pausanias <sup>117</sup> speaks of a θέατρον ὀρεχαῖον at Elis. Obviously he is not thinking of the stage buildings, which date only from the third century B.C.<sup>117a</sup> The word θέατρον <sup>118</sup> frequently designates the auditorium alone, and it is of this that Pausanias was thinking. Old rustic wooden benches would, by his time, have seemed extremely antiquated.

# AIGIRA (Achaëa) <sup>119</sup>

*Situation.* The theatre, which has a rock-cut *cavea*, is situated on the ancient acropolis, a high plateau about two miles from the sea. The *cavea* faces east towards the acropolis wall, and lies on a rough triangular eminence.

*Planning.* The orchestra circle is prolonged, probably by straight lines. There are eleven *kerkides* with twelve stairways, and two *diazomata*, the upper one larger. The whole is enclosed by a wall surmounting the rock edge and made of large rough blocks of local stone; its shape can be seen in fig. 12.

*Entrances.* Apart from the two *parodoi* there is an entrance at each end of the upper *diazoma*, and a narrow external staircase leads to the topmost seats from the south side; this is also cut out of the rock.

*Seats.* No mouldings or division of foot-space. Average height 33 cms., width 65–72 cms. No mention is made, in any account, of the presence of a deep water-channel, similar to those at Argos and Syracuse, but with the exceptional width of 43 cms. A cross-section of this and of the adjacent

<sup>115</sup> Until at least the Hellenistic age there can have been no stage at Sparta. The peculiar character of the Sparta theatre is recognised in several passages from ancient authors, for which see Bulle 108.

<sup>115a</sup> See BSA XXVII, pl. XXVII. In this case the west water-channel may also have been moved.

<sup>116</sup> O. Walter, *ÖJh* 1915, Beiblatt, 58; Bulle 247;

Arias 84. Excavated by the Austrian School in 1914.

<sup>117</sup> VI, 26, 1.

<sup>117a</sup> Bulle 247.

<sup>118</sup> See A. Müller, *Philologus*, Suppl. Bd. VII, 65.

<sup>119</sup> O. Walter, *ÖJh* 1919, Beiblatt, 20; short notice in Bulle 259; Arias 82. Excavated by the Austrian School in 1914.



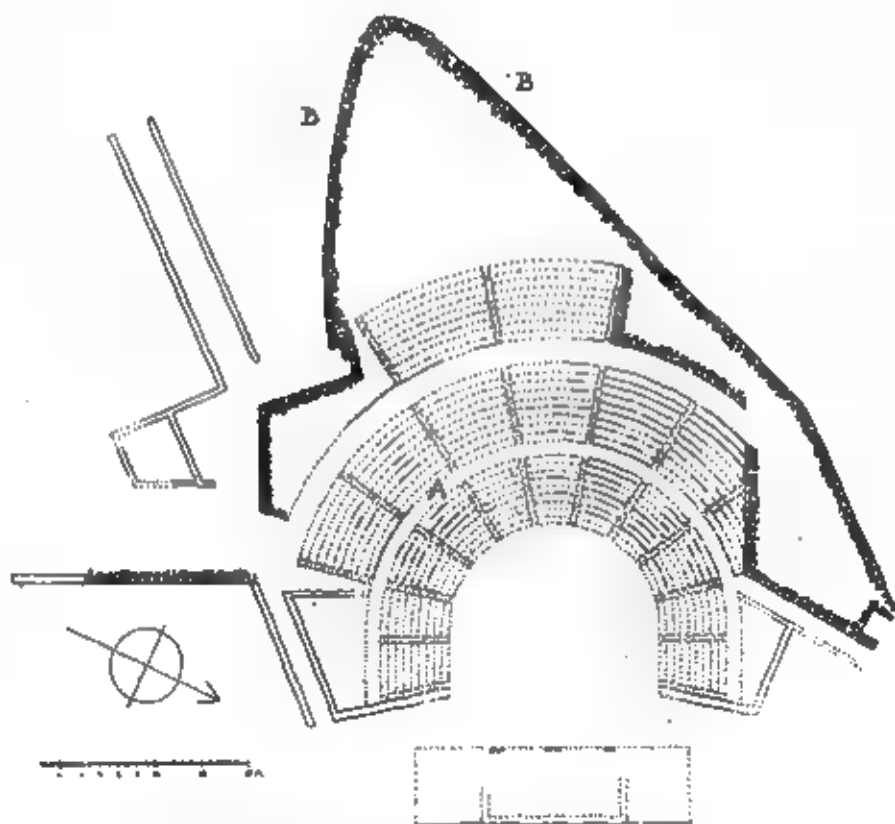


FIG. 12.—ALGERIA. PLAN OF THE THEATRE. From Walter, *loc. cit.*

A Lower *diakoma*; rock wall 1.35 m. high. B Rock falls nearly 5 m. here.

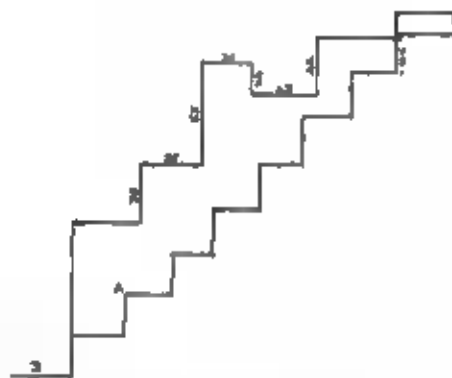


FIG. 13.—ALGERIA. SECTION ABOVE LOWER *DIKOMA* (not to scale).

A Stairs. B Lower *diakoma*.

seats and steps is given in FIG. 13. The tier immediately above the diazoma wall was evidently used by spectators, as it is of the normal height and can easily be reached from the stairs.

At the back of the cavea is a flat space of triangular shape, bounded by the low *analemma*. Owing to its flatness, Walter conjectures that it was never used. But this does not explain (a) the detour taken by the *analemma*, or (b) the fact that the external staircase from the south leads directly to it. Surely wooden seating, supported on scaffolding, could have been used here as an extension of the small auditorium.

*Stairs.* Rock-cut. The width varies; the rise is 16.5 cms., except just above the lower *diazoma*, where it is 19 cms. This does not indicate any difference in the inclination, but is the normal raising due to the *diazoma*. Apart from the level triangle at the back, the inclination does not vary.

*Date.* Arias hazards second century B.C.; but this seems too late for such a roughly finished construction.

#### SIKYON<sup>120</sup>

*Situation.* The town of Sikyon extended from the hills to the Corinthian Gulf, a distance of some three miles. After the earthquake of 303 B.C. the inhabitants abandoned the coastal parts and gathered round the acropolis. The theatre faces approximately N.E.<sup>121</sup> over the plain and sea. Rock is visible not only in the stage buildings but above the *diazoma* also, and a few rows are cut out of the rock; but it is hardly correct to speak of the theatre as rock-cut.<sup>122</sup>

*Planning.* The most curious feature is the pair of arched passages, one at each end of the *diazoma*, which cut through the artificial embankments supporting the cavea. These passages remain in good state of preservation.<sup>123</sup> The number of *kerkides* is fifteen, with sixteen stairways, this being the largest number known in any theatre in mainland Greece. The two lateral *kerkides* are rather larger than the rest, and contain *prohedria* benches<sup>124</sup> in the second row instead of in the first. These are of the same length as the other thirteen, i.e., they do not occupy the whole of the space between the lateral and adjacent stairways. Probably these two benches were so placed right from the

<sup>120</sup> *AJA* 1st ser. V (1889), 267, pl. 9 (Trowbridge); IX (1893), 288; and ser. IX (1905), 253, pls. 8-9 (Possum); Flechter, *Sikyon*, 27; D.R. 117; Bulle 192; Arias 75. Excavated 1886-7 and later. Photograph PLATE 36.

<sup>121</sup> The indication of north given in *AJA* 1st ser. V (1889), pl. 9 is very different from that of H. Wörms's plan in Bulle. Neither is quite correct, but the American plan is to be preferred.

<sup>122</sup> As do A. Müller, *Lehrbuch der griechischen*

*Bühnenaltertümer*, 30 n. 3, Curtius, *Peloponnesos*, II, 490, and others.

<sup>123</sup> Flechter calls them *comitoria*, but this word is confusing, as it makes one think of the arched exits in the Roman theatre, which were an architectural necessity due to its totally different method of construction.

<sup>124</sup> See *BSA* XLIII, 169; they are not mentioned elsewhere, even in Flechter's comprehensive survey.

beginning, for there is no sign of dowel-holes in the front row, which is left empty. The object of this placing seems to be as follows. The prolongation of the semicircle round the orchestra continues in the same arc (cf. *BSA* XLIII, 140, fig. 5a); thus the two lateral benches would have obstructed the smooth exit of spectators, and this was avoided by placing them in the second row.

There is only one *diazoma* visible, not two as Bulle suggests. The number of rows cannot be exactly computed owing to poor preservation and collapse at the top: Trowbridge estimates forty, Fossum and Bulle sixty; but fifty seems a more reasonable calculation. The wings are built up artificially with earth.<sup>125</sup> The orchestra, with a diameter of over 24 m., contains an elaborate system of water-channels.

*Entrances.* The two *parodoi* have walls converging considerably towards the exterior, where there are posts for gateways.<sup>126</sup> An unusual feature is the combination of rock and masonry in the *parodos* walls, giving a 'cyclopean' effect. The two arched passages mentioned above lead to the *diazoma*, and are unique of their kind: <sup>127</sup> a full description is given in *AJA* 1st ser. V (1889), 288-9.

*Stairs.* The chief peculiarity consists in the arrangement, elsewhere found only at Athens and Peiraeus, of fitting *one* step to each row instead of two. The inclination of the cavea is roughly 1:2, and the steps are consequently made to slope upwards,<sup>128</sup> as at Athens; but they are not grooved like the latter. There is no subdivision of stairways above the *diazoma*. The average width of the stairs (between one *kerkis* and the next) is 65 cms.

*Seating.* The seats are not everywhere preserved, and in a few places have not been excavated. They vary considerably in material, but none of it comes from any distance; most has been quarried from the hollow itself. This is a soft reddish limestone, varying in colour, so that the seats do not have a uniform appearance. Apart from the limestone seats there are a certain number cut out of the rock, all in the *epitheatron*. McMurtry<sup>129</sup> says that these have footrests with an elevation of 35 cms. above the seat in front, but no such plan is now visible. There are certainly footrests, but most of them are very shallow: FIG. 14 shows a typical section. Measurements of seats below *diazoma* (see FIG. 1 above): <sup>130</sup> PQ 78.5, AB 34, ND 37.5, AL

<sup>125</sup> Trowbridge in *AJA* 1st ser. V (1889), 267 speaks of 'masonry covered with earth'. This appears to be a mistake.

<sup>126</sup> These can clearly be seen in PLATE 3c.

<sup>127</sup> All authorities now concede the existence of Greek arches; but there is no parallel in this position in a theatre.

<sup>128</sup> Modern Greek villages often have flights of steps with a considerable upward slope on each step.

<sup>129</sup> *AJA* 1st ser. V (1889), 278. Perhaps he means 3.5 cms.

<sup>130</sup> Collated from *AJA* 1st ser. V (1889), Fiechter, Sjöqvist, and from observation.

6 cms. CD is sunk a little in the case of the seats below the *diazoma*, except in the row immediately behind the *prohedria*. This row lies on a level about 50 cms. higher than that of the foot of the *prohedria* (it corresponds to two steps 22.5 cms. high with a considerable slope). By this means a clear view is obtained over the backs of the *prohedria* benches, which are mostly 76 cms. high.<sup>181</sup> AL projects in all the seats below the *diazoma*, and in a few above it, but not in the majority.



FIG. 14.—SIKYON. ROCK-CUT SEATING.

*Diazoma*. This is wide, and is bounded on the upper side by orthostates, which are badly preserved. These are 84 cms. high, and below them is a low step 63.5 cms. wide, the purpose of which is hard to ascertain, and a water channel.

*Prohedria*. See BSA XLIII, 169 f.

*Analemmata*. Apart from the *parodos* walls, mentioned above, the *analemmata* are poorly preserved. They can never have been of great height, as there is no earth to support.

*Date of cavea*. Begun about 300 B.C.,<sup>182</sup> completed later. The arched passages are probably an addition at a time when the *epitheatron* was created. Fossum<sup>183</sup> claims, as evidence for an earlier date for the theatre, not only its alignment, which has been discussed in BSA XLIII, 139, but the fact that the prolongation of the orchestra circle in the same arc and the overcrowding of *kerkides* are signs of early technique, as against the harmonious layout of Epidauros. It has been argued above that Epidauros represents an architectural experiment rather than the acme of perfection, and there is no reason to consider either of these peculiarities early. The prolongation in the same arc is found in late Hellenistic and Roman orchestras; while the greatest number of *kerkides* known is in the late theatre near Xanthos (Asia Minor), which has twenty.

<sup>181</sup> The measurement at the rear; Fiechter gives 82 cms., but this is incorrect.

<sup>182</sup> Bulle (199) suggests the first half of the third

century; Fiechter gives a date shortly after 305 B.C. (cf. p. 58 above).

<sup>183</sup> *AA* and ser. IX (1905), 272.

DELOS <sup>123</sup>

*Situation.* The cavea faces W.S.W., and the upper rows have a fine view over the island of Rheneia and the sea. The principal entrance is from Theatre Street via the north *parodos*; other entrances are mentioned below.

*Planning.* The cavea forms almost exactly seven-twelfths of a circle. Fossum's statement <sup>124</sup> that 'the architect has drawn the auditorium circle

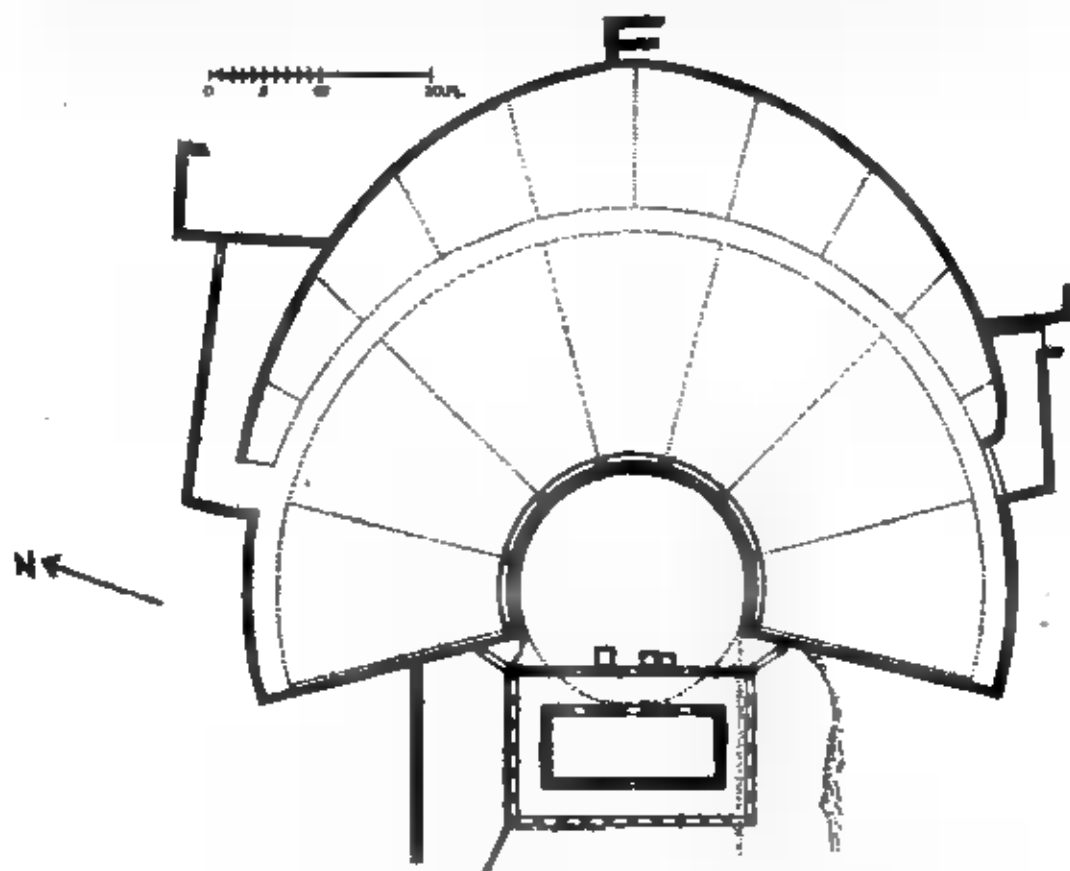


FIG. 15.—DELOS. PLAN OF THE THEATRE. FROM D-R 144, fig. 58.

with the same radius all round' is incorrect: Chamonard <sup>125</sup> points out that if the *parodos* walls were produced towards the orchestra they would join at a point 1.60 m. west of its centre. But Chamonard is himself incorrect in maintaining that the western half of each lateral *kerkis* is straight. On the

<sup>123</sup> J. Chamonard, *BCH* XX (1896), 256, pls. 19-23; R. Vallois, *Nouvelles Archives des Missions Scientifiques*, 1921, 213; Fossum, *AJA* XXX, 74; Y. Béquignon and J. Replat, *BCH* LI (1927), 401; Bulle 174; R. Vallois, *L'Architecture hellénique et*

*hellénistique à Delos*, I, 220, 231; O. A. W. Dilke, *Mus. Helveticum*, V, 60. Excavated 1882, 1892, 1912. See fig. 16, and photograph PLATE 46 below.

<sup>124</sup> *AJA* XXX, 73.

<sup>125</sup> *BCH* XX (1896), 259.

north side, it is true, some of the upper rows appear at first sight to be in part straight; but here the ground has been much disturbed. The lower rows, which can be observed more exactly, show a curve more gentle than that of the centre of the cavea, as at Epidauros and elsewhere.

*Analemmata.* The outside of the cavea is completely surrounded by the *parodos* walls and the circular *analemma*. Rock is still visible a few metres behind the centre of the circular *analemma*, and is reported to have been found in the orchestra just below the original earth level; thus the slope of the rock determined the inclination of the cavea. The latter will be seen from seat measurements to be: below the *diazoma*, 1 in 2.06; above the *diazoma*, 1 in 1.60, a particularly steep slope. High rock is also visible on each side of the stage buildings. On the north *parodos* a wall,<sup>136</sup> flanking to the north the entrance from Theatre Street, meets the side *analemma* at a slightly obtuse angle (as seen from the orchestra). The purpose of this wall appears to be chiefly to hide the rock outcrop behind it. Chamonard shows that its greatest height was 7.75 m. (all preserved) at the north end; its width, including the coarse marble revetment, was 1.65 m.

An interesting feature of the side and circular *analemmata* is a number of well preserved marble coping blocks, which crowned a balustrade of orthostates on the top of the wall. Their shape and dimensions are given in BCH XX (1896), 263, fig. 1. There are two sizes preserved; the larger must belong to the *parodos* walls, the smaller to the circular *analemma*. The proof of this, which is not given by Chamonard, is in the relative positions in which they were found. For example, one or two blocks from the north *parodos* wall may be seen lying just under stairway 1, in PLATE 4b. It is obvious from the *anathyrosis* ends of these coping blocks that they ascended in a gentle slope, not in a series of jumps.

The two wings of the circular *analemma* radiate from the orchestra; its northern sector between the side entrances radiates from a centre south and east of the orchestra centre; the corresponding southern sector radiates from a centre north and east of it. The two centres are 6.50 m. from each other, and the design is evidently intentional.<sup>137</sup> The uppermost rows follow the curve of the *diazoma*, not that of the *analemma*. As a result of these peculiarities there is an empty space at the top, though only in the centre. The top rows are cut off as the wall approaches the wings.

<sup>136</sup> Classified by R. L. Scranton, *Greek Walls*, 173 as trapezoidal isodomic tooled work. See below, PLATE 4b, and BCH LI (1927), 404, fig. 1.

<sup>137</sup> See Chamonard, BCH XX (1896), 264; Béguignon and Replat, BCH LI (1927), 401, work out a complete geometric layout for the theatre; but Vallois, *L'Architecture hellénique etc.*, 223, points out

that originally the proscenium was shorter than its present length, which cannot therefore be used as a unit of measurement. Dörpfeld's plan reproduced in fig. 15 above over-emphasises the difference between the two centres, making them appear to be about 12 m. apart.

*Entrances.* Immediately above the north and south upper entrances, which had doorways with posts and capitals at the two ends of the *diazoma*,<sup>138</sup> there are only two rows of *epitheatron* seats. To the west of the upper entrances, towards the wings, there are no equivalent rows, but platforms which continue the line of the *diazoma*. These give a total width, including the *analemmata*, of 2.80 m.

Besides the *parodoi* there are three entrances into the *cavea*: those to the north and south emerge into the *diazoma*, that to the east gives access, by way of the small platform mentioned, to the uppermost rows. The north and south entrances are approached by well constructed slopes with gateways.

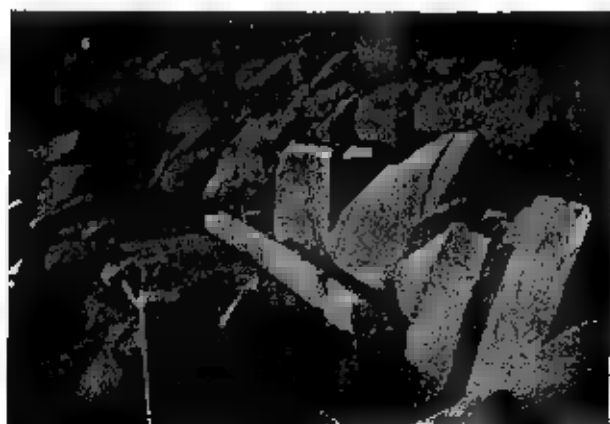


FIG. 16.—DELOS. SOUTH END OF DIAZOMA.

*Diazoma.* The back wall of the *diazoma*<sup>139</sup> is composed of a base 25.5 cms. high, an orthostate 75.5 cms. high, and a carved coping of semi-circular section. Total height 1.17 m. Width of *diazoma* at wings 1.50 m. The revetment of the back wall is of streaky grey Delian marble, patched in places with white marble; but towards the south the orthostates are all in white marble. The placing of the *diazoma* is determined to a certain extent by the rock, which has an outcrop level with the top of the *diazoma*.

*Rows.* The number of rows is twenty-six below the *diazoma* and probably seventeen above (in centre), a total of forty-three. There are seven *kerkides* and eight stairways.<sup>140</sup>

<sup>138</sup> Vallois, *Nouvelles Archives des Missions Scientifiques*, 1921, 212; cf. Béquignon and Replat, *BCH LI* (1927), 407.

<sup>139</sup> See Vallois, *L'Architecture hellénique etc.*, 221, n. 1; also *ibid.* 17.

<sup>140</sup> For the doubling in the *epitheatron*, see below. Chamonard estimates the number of spectators at

our thousand three hundred for the lower part and one thousand two hundred for the *epitheatron*, a total of five thousand five hundred. But this is calculated on the over-generous allowance of 50 cms. width per person. If we allow 41 cms., we arrive at about six thousand seven hundred in all.

*Seats.* See BSA XLIII, 157. Apart from foundation blocks, these are in Parian marble. They are poorly described by Chamonard, who did not excavate the whole of the cavea. This was done in 1912 by Vallois.

*Stairs.* The stairways are not quite symmetrically placed, but all the *kerkides* except one have, at the *prohedria* row, a width of 5.51–5.73 m. The stairs are of single blocks of Parian marble, length (width of stairway) 66 cms., breadth (average) 30 cms., height 16 cms. The three central *kerkides* are divided by the doubling of stairways above the diazoma; possibly five, including one on each side, were originally so doubled.

*Prohedria.* See BSA XLIII, 171 f.

*Date.* The stone seating was laid down between 297, or earlier, and 246 B.C. Details of the inscriptions and chronology have been fully discussed elsewhere.<sup>141</sup> The first extant references to the theatre are in an inscription prior to 300 B.C.,<sup>142</sup> viz. IG XI 2, 142, where ll. 27 f. read . . . τὴν εἰσο[δον τῆ]ν τοῦ θεάτρου [ἐ]δω[κ]αμεν ΔΔΔΔ, and l. 43 mentions the construction of τὰ περὶ τὴν σκηνὴν . . . ξύλα. P. H. Davis<sup>143</sup> states that this inscription 'is now found to contain material concerning the seats of the auditorium'.

#### THERA <sup>144</sup>

*Situation.* The ancient town was situated in the S.E. of the island (seven miles from the modern capital), on a steep rocky plateau high above the sea. The small theatre (diameter of orchestra 9.58 m.) was built on a steep slope<sup>145</sup> running down from the principal thoroughfare, and faced approximately N.E.

*Planning.*<sup>146</sup> The ground-plan is completely circular at the bottom, and the five *kerkides* are divided by six stairways. Only those surrounding the middle *kerkis* reached the extreme rear of the cavea, the others being to a greater or less extent cut off by the side walls.

*Analemmata.* To the S.E. and N.W. are side walls, the N.W. one separating the cavea from a steep alley leading into the principal road, and being broken at the top by the upper doorway. To the N.E. are the stage-buildings, and behind them a third wall. To the S.W. are two broken walls, not quite in line, and, behind, a narrow level space separated from the main road by another wall.<sup>147</sup> The four walls enclosing the theatre make a rectangle,

<sup>141</sup> Bulle 174; Vallois, *L'Architecture hellénique* etc., I, 231; Dilke, *Ann. Helotica* V, 60 (where my support of Bulle's postulate of an earlier wooden cavea now seems less warrantable, as I had omitted consideration of two inscriptions overlooked by Bulle, IG XI 2, 142 and 150 A).

<sup>142</sup> Vallois, *L'Architecture hellénique* etc., 234, n. 4, gives 305 B.C.

<sup>143</sup> *AJA* XLI, 109 (short summary of unpublished paper).

<sup>144</sup> For bibliography, see BSA XLIII, 172, n. 2.

Cavea excavated in 1899. Photographs PLATES 3 f. 54.

<sup>145</sup> Height ratio is 34.5 cms. to 66, i.e., 1 in 1.91.

<sup>146</sup> See Thera III (Hiller), fig. 237.

<sup>147</sup> Nothing need be added to Dörpfeld's discussion on the function of this narrow space (UVWX in Thera III, fig. 237), owing to its poor state of preservation. It is possible that the foundations, which are not much above rock level, have become displaced by an earthquake; deductions are therefore difficult. See Thera III, 256; Arias, *Dianiso*, IV, 96 ff.



into which the circular ground-plan has to fit as well as possible. The walls are well preserved in most places (*cf.* PLATES 3*f* and 3*d* below). While the N.W. wall, which contained the entrances, is of squared ashlar masonry, the others are built of large blocks but in a more haphazard fashion.

*Entrances.* Of these there were two only, both situated on the same side of the theatre, *i.e.*, at the top and bottom of the N.W. wall. The lower one is poorly preserved, but the top one <sup>148</sup> is in excellent state of preservation, and creates the impression of being very similar to the front door of a Hellenistic house. Two passages lead to the seats from this upper doorway; one goes straight ahead, rises two steps, then narrows down slightly, keeping close to the S.W. wall; the other descends in steps inside the N.W. wall, and connects with the fifth stairway, stopping at that point. Dörpfeld <sup>149</sup> says there is no trace of such a stairway, but he appears to be mistaken. On the other hand, there is neither evidence nor need for the bottom half of this N.W. stairway, nor for one on the opposite (S.E.) wall, as marked in the restored plan, *Thera* III, fig. 238.

*Rows.* The seats are not so well preserved as the stairs, and exact calculations are difficult. But Dörpfeld has estimated that there were originally twenty-three rows in the centre, and a decreasing number down to nine at the sides, and that the maximum seated audience was one thousand five hundred.<sup>150</sup>

*Seats and Prohedria.* See *BSA* XLIII, 157 *f.*, 172 *f.*

*Stairs.* The first and second are missing, the third and fourth well preserved, the fifth and sixth poorly. The steps are, as usual, two to each row, and are formed of small blocks, overlapping only slightly. Their longest side measures 59 cms., but this does not constitute the width of the stairways, as 7 cms. on each side are occupied by a small trimming block, and a further space of up to 3 cms. on each side is taken up by the overlapping of the seat ends; <sup>151</sup> so that the minimum effective width of the stairways is only 39 cms. (59 less 20).

*Dating.* For the possibility of an earlier rectilinear cavea, suggested by Anti, see *BSA* XLIII, 188, n. 1; *cf.* also R. E. Wycherley, *JHS* LXVII, 137. Dörpfeld <sup>152</sup> supposes that, whereas the theatre was built in the third century B.C., the cavea was altered from wood to marble about the middle of the second century. He supports his argument partly by the absence of a stone *skene* at first, partly by the good quality of the marble, which he

<sup>148</sup> See PLATE 3*f*; *Thera* III, 233.

<sup>149</sup> *Thera* III, 256.

<sup>150</sup> One thousand two hundred to one thousand three hundred seems a more reasonable figure, considering the shortness of the front rows and the cutting off of others.

<sup>151</sup> Where these overlap, it is noticeable that they are tricomed at right angles with their front edge rather than exactly parallel with the stairs. This perhaps indicates rough workmanship.

<sup>152</sup> *Thera* III, 260.

considers a proof of some luxury, and so of a date when Thera was most flourishing. This is not in accordance with his previous statement that the small lower blocks of the seats were a device for economy's sake, as in fact they must have been.<sup>153</sup> The close similarity of the latter with those at Delos suggests a date in the first half of the third century.<sup>154</sup> It is true that the rectangular wall system fits badly with stone seating; but even if Anti's theory is not accepted, we have parallels for this elsewhere, e.g., at New Pleuron. A final argument lies in the great height and narrowness of the seats, a feature absent from later caveas.

#### APTERA, CRETE<sup>155</sup>

*Situation.* The walls of the ancient town are well preserved round a high plateau known as Palaiókastro (or Aptera), ten miles east of Canea. The theatre is in a small natural hollow, facing a few degrees west of south. Pashley visited the site in 1834, and evidently found the theatre in approximately its present state; he describes it as being E. to N.E. of the monastery,<sup>156</sup> whereas it is actually almost due south of it.<sup>157</sup>

*Planning.* Only an area equal to twenty-five to thirty rows is now preserved. Nearly all the seats have fallen out of position, and it is impossible to determine the ground-plan or number of *kerkides*. Bursian's statement that the theatre is '*ziemlich wohl erhalten*' is a gross exaggeration, as is also Pashley's theory quoted in *BSA* XLIII, 162. A small area of the cavea has certainly collapsed; but it is not likely that this unimportant town had a large theatre, and the extant ruins do not suggest anything larger than about thirty-five rows at the most.

*Seats.* The great majority have fallen into the orchestra; a few are *in situ* about twelve rows up from the orchestra, but even these are slightly shaken out of position. They are of the same hard grey limestone as the *skene* foundations. Each seat and footrest forms a single block. Measurements (see FIG. 1 above): AB 31, BE 30, BC 1-1.5, EG 24, PQ 61, forward projection of fillet 2.5, AL 4, ND 34 cms. The section represented by CD has, in places on some blocks, cuttings in straight lines, parallel to the front of the seats, possibly for the insertion of small detachable wooden backs. A similar straight incision is, however, to be seen on a block 54 x 41 cms. in

<sup>153</sup> Anti, *Dioniso*, XII, 71, challenges my interpretation of all similar seating as an economical device; but it must be remembered that stone was more precious than labour where transport was involved.

<sup>154</sup> Magnesia, however, was probably copied from Priene after a long interval; see Dörpfeld, *AM* XIX, 70.

<sup>155</sup> Not mentioned in works on the Greek Theatre. Bursian, *Geogr. Gr.*, II, 543; Pashley, *Travels in Crete*, I, 37. Not excavated.

<sup>156</sup> This is the same monastery as is now there, and on visiting it I was told about its mother church at Patmos in almost the same way as Pashley was.

<sup>157</sup> Cf. Admiralty Chart, *Suda Bay and Canea*.

top surface, which cannot well be a seat. A large block incorporated in a modern terrace wall to the south may be a single *prohedria* in one block, but is much defaced.

*Dating.* The type of seat indicates Hellenistic building, perhaps of the third century B.C. The material of the seats and that of the *skene* foundations is the same; over the latter is a layer of concrete, probably Roman work.

O. A. W. DILKE

## A NEW SITE ON MOUNT LUTRAKI<sup>1</sup>

(PLATE 6)

In ■ note at the end<sup>2</sup> of his preface to *Perachora I* (1940), Mr. T. J. Dunbabin mentions a new site which he had discovered on the summit of Mount Lutraki.<sup>3</sup> I visited the site (*cf.* FIG.) in July 1949 and found ■ good fragment of a *sima* lying among the débris on the small platform (PLATE 6(a)) immediately S.W. of the summit. The platform measures barely six feet by four feet in its present state, but there is reason to suppose that it was formerly larger.



MOUNT LUTRAKI FROM THE GULF OF CORINTH.

The importance of the *sima* fragment depends upon whether it was *in situ* when I found it. If it was, its presence may well be indicative of the

<sup>1</sup> I would like to record here the debt which I owe to the constructive criticism of this note by the Director of the British School, and to the kindness of Messrs. Popham of St. Andrews and Healy of Cambridge, who photographed the *sima* fragment and the view of Mt. Lutraki respectively.

<sup>2</sup> Note on ■. vii.

<sup>3</sup> The mountain is 3000 feet high, and is the most prominent feature on the Perachora. It is precipitous near the summit and well wooded on the flanks.

former existence of a shrine at this point. It seems, however, unlikely that this could be equated with the temple of Poseidon mentioned by Xenophon<sup>4</sup> in his account of Agesilaos' attack on the Perachora in 391-90 B.C., since (1) the site is too small to have supported a full-size temple; (2) Xenophon mentions the burning of the temple as an after-thought, and not as having any connection—except a temporal one—with what goes before.

καὶ ταύτην μὲν τὴν νύκτα ὁ μὲν πρὸς ταῖς θέρμας ἐστρατοπεδεύετο, ἡ δὲ μόρα τὰ ἄκρα κατέχουσα ἐνυκτέρευεν. ἐνθα δὴ καὶ ὁ Ἀγησίλαος μικρῷ καιρίῳ δ' ἐνθυμήματι ἠὺδοκίμησε. τῶν γὰρ τῇ μόρᾳ φερόντων τὰ σιτία αὐθενὸς πῦρ εἰσενεγκόντος, ψύχους δὲ ὄντος διὰ τε τὸ πᾶν ἐφ' ὑψηλοῦ εἶναι καὶ διὰ τὸ γενέσθαι ὕδωρ καὶ χάλασαν πρὸς τὴν ἐσπέραν, καὶ ἀνεβέβηκεσαν δὲ ἔχοντες οἱ αὖθις θέρους σπειρία, ριγούντων δ' αὐτῶν καὶ ἐν σκότῳ ἀθύμας πρὸς τὸ δειπνῶν ἔχοντων, πέμπει ὁ Ἀγησίλαος οὐκ ἔλαττον δάκα φέροντας πῦρ ἐν χύτραις. ἐπειδὴ δὲ ἀνέβησαν ἄλλος ἄλλη, καὶ πολλὰ καὶ μεγάλα πυρὰ ἐγένετο, ὅτε πολλὰς ὕλης παρούσης, πάντες μὲν ἠλείφοντο, πολλοὶ δὲ καὶ ἀδείκνυσαν ἐξ ἀρχῆς. φανερὸς γὰρ ἐγένετο καὶ ὁ νεὸς τοῦ Ποσειδῶνος ταύτῃ τῇ νυκτὶ καόμενος. ὑφ' ὅτου δ' ἐπεπρήσθη οὐδεὶς οἶδεν.<sup>5</sup>

Grote's<sup>6</sup> contention that the temple of Poseidon was situated at the top of the mountain, and not at the Isthmus, as Payne,<sup>7</sup> probably rightly, conjectured, is not borne out by the Greek. Xenophon states quite specifically that the origin of the fire was unknown, which does not look as though he connected it with the activities of Agesilaos' troops. The platform as it stands today could support only a small shrine, but it may formerly have been larger as its eastward extremities have collapsed into a gully. This supposition gains support from the presence of a hollow in the rock face, some ten feet above and on the far side of the gully from the platform, which has all the appearance of a votive niche. Its size is approximately three feet by one foot, and it is six inches deep at the bottom, growing more shallow towards the apex. I climbed up to this hollow but was unable to decide the question beyond all reasonable doubt. The gully contains much débris, including sherds and fragments of roof tiles, but those which I examined, together with others lying in the vicinity, were all, as far as I could determine, of Roman date. I followed the gully down in my descent, and noticed many scattered sherds, some of which may have been prehistoric. More sherds were scattered about the base of the mountain above the old road leading from Lutraki to Perachora village.

The fragment (PLATE 6(b)) is broken at the top and sides and shows, on the *cymatium*, the bottom half of tendrils ending alternately in opposed spirals and loops. On the lower face a black single meander is framed by a red

<sup>4</sup> Hell. IV, v.

<sup>5</sup> Hell. IV, v, 3.

<sup>6</sup> Ed. 2, ix, 479.

<sup>7</sup> Perachora I (1940), 17, n. 2.

square with four solid black squares, with a red band on the soffit. The length of the face is 0.157 m., height 0.06 m., red band 0.11 m. The work is neat, and the colour well preserved. The clay is yellow and smooth, and the slip is the same. A comparison with the examples<sup>6</sup> in the museum at Old Corinth suggests that it may date from the early fifth century B.C.

The possibility that someone carried the fragment up to the mountain top cannot be ruled out, having regard to the stone-throwing proclivities of Greek goat-herds (in whom the mountain abounds), but the contingency seems less likely in the light of the evidence stated above.

J. R. T. POLLARD

*The British School at Athens.*

<sup>6</sup> Cf. especially T. 40, Corinth IV, 1, 204.

### THREE ATTIC TEMPLES<sup>1</sup>

(PLATES 7-9)

Scholars since Lethaby<sup>2</sup> have tended to see the hand of one architect in three famous buildings, the Hephaisteion at Athens, the Temple of Poseidon on Cape Sounion and the Temple of Nemesis at Rhamnous. All three belong to a very widespread type, the hexastyle temple with *pronaos*, *cella* and *opisthodomos*. But their similarity beyond this is held to necessitate a common authorship. It has proved impossible up to now to collect and review their points of resemblance; which is perhaps one reason for the long dispute on their dating and sequence.<sup>3</sup> I hope to contribute towards this much needed collation, and I believe that, as things are, it would prove useful to compare the main lines and dimensions of all three buildings.

While, in fact, I aim at more than that, I naturally make no claim to finality. For the upper parts of the Hephaisteion I have depended on the reports of other scholars, not all conveniently accessible in Athens. Sounion is overgrown, and I lacked strength and permission to turn the larger blocks. So I was unable, for instance, to see the evidence on the *geison* blocks for the spacing over the side peristyles.<sup>4</sup> I could pay Rhamnous only two short visits, each of several hours. It is now very difficult, more difficult even than it was for Zschietzschmann,<sup>5</sup> to stay in the neighbourhood. I therefore overlooked matters I would have considered in a longer stay, such as the presence of lifting-holes in the upper face of both epistyle blocks and backers similar to those in the epistyle backers at Sounion. My omissions will become noticeable as this paper proceeds.

Thus a full record of dowels and pry-holes was too long and difficult to

<sup>1</sup> Readers of this paper are advised, where interested in any feature shown on my plates, to scrutinise my text carefully for the evidence (by no means conclusive) that I have to offer. I am indebted to most of the scholars now in Athens, not ■ of whom I can name here. My debt to the three American architects, Mr. Hill, Mr. Stevens and Prof. Dinamoer, is enormous and at once apparent. I have had the support of Prof. Orlandos, who not only placed his great knowledge of Sounion at my disposal, but secured me accommodation and valued friendships on the Cape. I am especially indebted to Mr. Travlos, who taught me how to make the diagrams for this paper, and to Mr. Pappas, who criticised my results. In the Agora, to which I resorted for instruments, I had only to ask in order to obtain. For this considerable extension of Lend-Lease I have to thank Prof. Thompson, Miss Talcott and our own Director. I have accepted many last-minute suggestions from Mr. Eden and Mr. Dunabin.

Lastly, I must make ■ the amends I can to Miss Welker, on whose space and patience I fear I too often trespassed.

<sup>2</sup> *Greek Buildings Represented in the British Museum*, 148. 'I do not think it has been noticed that the temple of Rhamnous . . . is so like the Thesaeum (viz. Hephaisteion) that one must be a copy of the other.'

<sup>3</sup> For this, see, e.g., Dinamoer, *Hesperia*, Suppl. V, 153.

<sup>4</sup> I use this term of the space between the outer colonnade and the wall of the *cella* buildings. In doing so I follow Dinamoer (*Hesperia*, Suppl. V, 59) and Stevens (*AJA* XV, 18). Durm (*Baukunst*, 1892, 146, et al.) refers to the same part of the building as a 'pteron'. There seems to be no ancient support for either usage, as Ebert insists in the case of 'pteron'. See his Würzburg dissertation, *Der Tempel* (1910), 6.

<sup>5</sup> *AA* 1929, 447 ff.

make and also, on an axonometric projection, to display. I have therefore recorded only the cross-clamps, which, with my resources, I could do more accurately at Sounion and Rhamnous than in the Hephaisteion. In general I have shown only those details on which I am reasonably certain or have reached decided views. Thus I have omitted pedimental sculptures on the one hand, though these certainly existed on the Hephaisteion and at Sounion, and cross-clamps in the orthostate course of the Hephaisteion<sup>6</sup> on the other. Not only have I shown no refinements, but I have left my ordinary measurements with a possible error of one centimetre either way. I have used and trusted Dinsmoor's very accurate measurements wherever I could. So I regard this paper as provisional, especially in view of the forthcoming studies by Koch of the Hephaisteion and by the Greek Archaeological Society of Sounion. But there seemed to be room for a comparison of the three temples as complete buildings.

## PART I

## THE HEPHAISTEION

(PLATE 7)

*Publications.*

Of these Dinsmoor gives an exhaustive list in the Introduction to his very recent study, 'Observations on the Hephaisteion', *Hesperia*, Supplement V. Stuart and Revett (Vol. III, Cap. 1) attempted the first complete publication. Among their successors only Hansen and Koch have endeavoured to cover the whole building; and the former never published, the latter has yet to publish his studies. Otherwise Ivanoff came nearest to a complete survey; but his *Architektonische Studien* were inaccessible to me in Athens in 1947-8. Thus I had often to rely on discussion of detail by Penrose,<sup>7</sup> Stevens,<sup>8</sup> and others, and sometimes on Stuart and Revett. Occasional comparisons of the Hephaisteion and Sounion appear in *Hesperia* IX, where Dinsmoor seeks to identify the Temple of Ares in the Agora as a fourth work of our architect, and I have found them very valuable. By 'Dinsmoor' simply I shall refer to *Hesperia*, Supplement V, by 'Dinsmoor IX' to this article in *Hesperia* IX. Where I give

<sup>6</sup> Thompson has recently proposed a complete restoration of the East Pediment of the Hephaisteion: see his article in *Hesperia*, 1949. My drawing, which I made just before his discovery of the figure of Herakles (Spring, 1948), will not permit me to show any of his restoration. I hope one day, if it wins general acceptance, to include it in a more complete study of the temple than that I am at present offering. For the pedimental sculptures of Sounion, see, e.g., Stais in *AE*

1917, 198 and Fig. 11. At Rhamnous, on the other hand, Orlandos believes the pediments were empty. (*BCH* 1924, 817.)

<sup>7</sup> *Principles of Athenian Architecture*, pl. XXXV and Chapter XI. Though he shows little, he shows it most accurately.

<sup>8</sup> 'The Ceiling of the Opisthodomos of the Thesaurion', *AJA* XV (1911), 18-23.



no authority for my measurements, these are my own. All measurements are given in metres.

### *Material and Technique.*

The building, from the middle step upwards, is of Pentelic marble, except for some slabs of Parian in the upper parts of the entablature and in the roof (Dinsmoor, 112). It is finished and polished throughout, except in the interior of the *cella* buildings, where the wall faces are stippled to receive plaster (Dinsmoor, 94). All the cross-clamps I could examine I found to have the common H form, but the actual vertical joints have two peculiarities. (i) Where diagonal joints are needed, as in the angles between the epistyle and frieze backers and the blocks of the internal cross-frieze, they are disguised by two right-angled turns.<sup>9</sup> (ii) Almost all the joints, in the *cella* walls at any rate, contain vertical grooves, whose purpose is obscure, set back a few centimetres from the inner face of the walls. They are shown in Dinsmoor on fig. 37.

### *General Dimensions.*

Length and breadth at bottom step:  $32.2445 \times 15.168$  (Dinsmoor, 33).

Length and breadth at stylobate level:  $31.7765 \times 13.708$  (Dinsmoor, 33).

Length at *corona* of *geison*:  $32.505$  (Dinsmoor, 114).

Breadth at *corona* of *geison*:  $14.43/4$  (calculated by adding to the breadth at stylobate level the projection beyond it of the *corona*, which is  $32.505$  minus  $31.7765$ , or about  $0.73$ ).

Height from bottom of lowest step to apex of pedimental raking cornice: about  $10.5$ . I obtained this in two ways. In the first, I added the different members. The three steps are each about  $0.36$  high (height of stylobate,  $0.364$ : Dinsmoor, 58), the columns  $5.713$  (Dinsmoor, 77), the entablature  $2.00$  (Dinsmoor IX, 22), the tympanum  $1.527$  (Dinsmoor A7A XLIII, 32) and the raking cornice a little below  $0.2$  ( $0.198$  'normal to the slope', according to Dinsmoor IX, 31).  $1.092$  plus  $5.713$  plus  $2.00$  plus  $1.527$  plus  $0.20$  will give  $10.53$ . In the second, I converted my reading of Penrose (*loc. cit.*) into metres, taking one inch as equalling  $2.54$  centimetres, and obtained a height of  $10.57$ .

Length of exterior of *cella* building<sup>10</sup> at toichobate level:  $22.56$  (Dinsmoor, 41).

<sup>9</sup> This is apparently Lethaby's 'joggle-jointing' perhaps shared with the Hephaisteion by fourth century Ephesus (Lethaby, *op. cit.*, 21). I find no examples

figured in Durm, and was puzzled by these joints until enlightened by Mr. Hill.

<sup>10</sup> viz. *pronaos*, *cella*, and *opisthodomos* combined.

Breadth of the same: 8.03. The total breadth equals the length of the toichobate of the cross wall (6.17: Dinsmoor, 47) plus twice the width of the toichobate of the side walls ( $2 \times 0.93$ : Dinsmoor, 41).

The unit: <sup>11</sup> 1.291 (Dinsmoor, 114). It is observed fairly closely not only in the entablature but also in the two marble steps.<sup>12</sup>

*Euthynteria* (of Poros).<sup>13</sup>

Height: 0.37 (Dinsmoor, 31).

Projection: 0.11 (Dinsmoor, 31).

Its courses follow those of the second step (Dinsmoor, 31). But it is much larger and rougher than the *euthynteria* of either Sounion or Rhamnous.

*Lowest step* (of Poros).

The height and projection, perhaps a trifle larger than those of the marble steps, I never measured accurately; and in my drawing I have shown only its corners, while I have omitted the *euthynteria* altogether. I was concerned to give only the marble courses. In the case of Rhamnous, however, the lower courses of which Dinsmoor (37) considers strictly parallel to ours here,<sup>14</sup> I have included the *euthynteria* and lowest step. To tell the truth, I could not see at Rhamnous where marble ended and local stone began: and I can say in my defence that the two blend far better at Rhamnous and in Dinsmoor's other parallel, the Older Parthenon, than they could ever have blended in the Hephaisteion.<sup>15</sup> Moreover, lower step and *euthynteria* at Rhamnous form that exact harmony with the rest which is to be found at Sounion, where all is of marble. The *euthynteria* of the Hephaisteion, as of the Temple of Ares (Dinsmoor IX, 25), is much heavier.

<sup>11</sup> By this term I mean half the normal interaxial distance between the outer columns. The unit determines the length of the stylobate blocks, of nearly all blocks in the entablature and usually of the roof tiles as well. The Hephaisteion (see below, p. 73) is a rare exception.

Tilton (*op. Waldstein, Argive Heraeum* I, 120) refers to one Greek foot as a 'unit'. I wish to make it clear that I am not using the word in Tilton's sense.

<sup>12</sup> Taking, for instance, the twenty-four marble blocks of the second step on the north side and excluding the east and west corner blocks (2.07 and ca. 2.10 respectively), one finds a line of twenty-one between 1.28 and 1.31, and only the twenty-second, at the extreme west, as short as 1.265. This seems to me to show the course was laid from east to west. It would be rational to lay out the important east end first, with the greatest possible precision of jointing (see also below, p. 70).

<sup>13</sup> Another term that worries me. I use it here, following Dinsmoor (33 ff.) and Robertson (*Greek and*

*Roman Architecture*, 41), of the course below the lowest step. I would prefer to use it of the horizontal plane forming the lower boundary of the visible building: a plane formed sometimes by levelling rock, sometimes by building up foundation courses. I understood Mr. Hill on the Acropolis to use it in this sense. But the low marble platform at Sounion, which Dinsmoor and Robertson would describe as a *euthynteria*, forms by contrast an integral part of the visible building. In ancient usage, as shown by IG II<sup>2</sup> 1668, 16 ff. (the specifications for Philo's Arsenal), εὐθυντήρια means what we call a toichobate: καὶ ἐπὶ τῇ εὐθυντήριᾳ ἐκδοῦναι ἀποδοῦναι ἐπὶ πέτρῃ τῇ εὐθυντήριᾳ κ.τ.λ.

<sup>14</sup> 'The purpose (of a poros lower step) obviously was, as previously in the Older Parthenon and later at Rhamnous, to effect a transition from the marble to the surrounding terrace.'

<sup>15</sup> The Kara stone of the Older Parthenon was distinctive and beautifully worked, and formed a true transition from marble to poros. See Hill, *AJA* 1912, 535 ff., together with his figs. 3, 12, and 13.

*Second step* (A on Plate 7).

Height: 0.36.

Projection: 0.367 (Dinsmoor, 33).

This is the lowest course of Pentelic marble, and on the east or principal side the arrangement of the blocks is most precise and symmetrical. Their lengths from north to south I measured as 0.93, 1.19, 1.22, 1.29, 1.295, 1.3, 1.3, 1.295, 1.29, 1.22, 1.19 and 0.93, totalling 14.45. The projection this gives of 0.37 beyond the stylobate shows my measurements are accurate.

*Stylobate* (B).

Height: 0.364 (Dinsmoor, 37).

Thickness: on long sides of temple, about 1.165; on short sides, about 1.17 (Dinsmoor, 57).

Each corner block forms a square on about 1.23, with a re-entrant angle cut out of its internal corner; for which see Dinsmoor, 37. The external face of each of its neighbours is about 1.1 in length. A floor-joint in the east peristyle is aligned on the west edge of the second block on both the north and south sides of the temple. As the most easterly line of floor blocks averages 1.16 in width, by subtracting the re-entrant in the eastern corner blocks (whose sides average about 0.06) one confirms the width of the second blocks as 1.10. See Dinsmoor, 37 and 59.

*Columns.*

Height of whole column: 5.713 (Dinsmoor, 77).

Height of *echinus* (with annulets): about 0.20.

Height of *abacus*: about 0.20.

Stuart and Revett (pl. VI) give the heights of *echinus* and *abacus* as 7.7 ins. (0.195) and 7.85 ins. (0.199) respectively. Lower diameter of shaft: 1.018 (Dinsmoor IX, 20). The angle columns, Dinsmoor alleges, are wider by 'one dactyl' or about 2 cms (IX, 24). This would agree well with the rule of Vitruvius<sup>18</sup> that the corner columns be increased by one-fiftieth of a lower diameter.

Upper diameter: 0.77 (from Stuart, pl. IV—30.63 ins.).

Length of side of *abacus*: 1.13 (from Penrose—3.74 ft.).

I have shown no necking-bands at the junction of the capital block and the highest drum of the shaft. I can detect no sure traces of them in the present poor state of the columns, but believe there was at most only one. I found it as

<sup>18</sup> III, 3, 12.

difficult to detect traces at Sounion, where Blouet shows only one necking-band.<sup>17</sup>

*Axial intercolumniation.*

This is normally 2.58, giving a free intercolumniation of about 1.56. These figures depend on those of Dinsmoor for the unit (1.291: Dinsmoor, 114) and the lower diameter (1.018: Dinsmoor IX, 20). They give an excess of free intercolumniation over lower diameter as great as 0.54; representing one extreme for Periclean temples. Most strangely, Sounion, if the excess there is only 0.436, represents the other. Dinsmoor fully admits this in IX, 22. But I shall argue below that his figure is wrong.

*Angle Contraction.*

This, for Dinsmoor, amounts to 0.17. In IX, 15, n. 28 he gives most precise figures, 2.581/2.583 for a normal intercolumniation, 0.168/0.170 for the angle contraction.<sup>18</sup> But Penrose, that other most precise surveyor, records an angle contraction of 8.4 ins., which amounts to 0.213. Stuart and Revett in their plan of the Hephaisteion would seem to make it even larger, about 9 ins.

All this is of little consequence to my drawing. But it affords an interesting comment on our knowledge. We have here a real discrepancy, which we cannot remove, even by allowing errors of one dactyl.<sup>20</sup> My own measurements, so far as they went, confirmed Dinsmoor. I cannot forbear to quote Lethaby<sup>21</sup> 'as some revenge for the awe I used to feel for these elaborately figured dimensions'. The relatively small angle contraction produces a markedly different effect from that of the Parthenon.

*Epistyle (C).*

Height: 0.824 (Dinsmoor IX, 21).

Width of soffit: about 1.0. I read the width in Penrose as about 3.4 ft., which gives about 1.03. The soffit, as at Aegina,<sup>22</sup> is thus as wide as the lower diameter. (We shall find that in our other two temples it is narrower). Its width, moreover, is just half the height of the entablature.

The end epistyle blocks on the east and west fronts are prolonged to the corners. The end blocks of the flanks stop short over the centres of the angle

<sup>17</sup> *Expédition Scientifique de Morée* (1831) III, pl. 32.

<sup>18</sup> This figure, indeed, is entailed by Dinsmoor's other dimensions, and I reached it from them for myself by taking the figure 0.0475, the distance at which, according to him, the outermost arrises of the column stood back from the face of the stylobate (IX, 24).

<sup>19</sup> For Dinsmoor's increase of the corner column, see

above, p. 70.

<sup>20</sup> *Op. cit.*, 43.

<sup>21</sup> Perrot and Chipiez VII, fig. 233, III. As Greek Doric architecture developed, it is on the whole true to say that the thickness of the epistyle, originally less than the lower diameter of the columns, came by degrees to equal and then to exceed it.

columns. The diagonal joints formed at the corners by the epistyle backers are 'joggled'. The *taenia* of these backers, as at Sounion but not at Rhamnous, becomes an Ionic moulding in the east peristyle.

#### Frieze.

Height: 0.828 (Dinsmoor IX, 21).

Width of triglyphs: 0.519 (Dinsmoor IX, 20, n. 43).

Width of metopes: 0.772 (1.291 minus 0.519). This equals the upper diameter of the shaft.

The jointing of the metope and triglyph blocks was irregular. Architects in Athens inform me that one bay of triglyph, metope-back and metope-face is formed now of three blocks, now of one alone. I suspect the former treatment is found in all the sculptured bays. I have shown it throughout the building.

The frieze backers (D) are equal in length to the epistyle backers below, and break joint with them for the most part exactly.

#### Geison (E).

Height: 0.35 (by calculation from the heights of entablature, epistyle and frieze).

Horizontal projection of *corona* beyond front plane of epistyle: about 0.47. I obtained this by calculation from Penrose, whose explicit figure of 1.534 ft. gives 0.468. The thickness of the *geison* with the *epikranitis* is thus approximately 1.5. The two are apparently of separate blocks; which is not the case at Sounion.

Height of *epikranitis*: 0.207. It equals that of the *cella* walls, for which Dinsmoor (74) gives this figure.

The *geison* blocks on their upper surface seem to slope upwards at the angle of the raking cornice for at least 0.15 from the *corona*. They observe the unit of 1.291, with two *mutules* and two *viae*, with two exceptions: (i) the two central blocks of each face, each of which has theoretically three *viae* and two and a half *mutules*, and is thus 1.68 long ( $= 3 \times 0.126 + 2.5 \times 0.519$ ); (ii) the four corner blocks, each a square on a side of 1.67 ( $= 0.5 + 2 \times 0.519 + 0.126$ ).

#### Pediment.

I have already discussed its general dimensions. It had a 'pedimental step', i.e., the rear portion of the horizontal *geison* was heightened, from a distance of about 0.06 ■ behind the *corona*, to give the sculptures a stronger

\* Penrose, *Principles of Athenian Architecture*, pl. XXXV; cf. Dinsmoor IX, 31.

footing. Its tympanum slabs were set slightly back from the outer plane of the epistyle and 0.49 from the *corona* of the *geison*.<sup>24</sup> The angle of the pedimental slope, according to both Stuart and Penrose, is  $14\frac{1}{2}^{\circ}$ .

I have no accurate measurements for the tympanum slabs. By eye I judged the lengths of the central slab and its two neighbours as each about 2.2 metres. Their joints are aligned on none of the courses below. As at Sounion,<sup>25</sup> the apex of the tympanum, its backers and the raking cornice are all one stone. One can see this clearly from the frontispiece to Dinsmoor and from Stevens, *AJA* XV (1911), 18-23, fig. 2. Penrose makes the block 1.4 ft. or about 0.43 high, and the vertical distance from its soffit to the top of the ceiling course about 1.2. This is occupied by three courses of tympanum backers.

#### *Evidence of Pediment for the Roof Beams.*

The ridge-beam, as is clear from Stevens, *op. cit.*, fig. 2, was grooved into the apex and the uppermost course of tympanum backers. There were two purlins, the holes for whose reception likewise survive in the tympanum backers. They were aligned, as at Sounion,<sup>26</sup> over the inner *epikranitis* of the *cella* walls, their lower faces 0.716 above the uppermost plinth course.<sup>27</sup> Their sides were vertical, not tilted outwards as at Sounion.

#### *Roof-Tiles.*

These are considered in detail by Dinsmoor (110-116 and IX, 34). The holes for the raking *sima* (F) along the raking cornice prove that each stretch of raking *sima* and consequently each pantile was 0.65 from its upper to its lower edge. Only 'one of the four topmost' was anomalous and as long as 0.72. This was surely the uppermost, partly covered as it would be by the cover tile along the ridge.<sup>28</sup> The flank *sima* sat unevenly on the *geison* blocks. Its first block at each corner was 0.67 long (Dinsmoor, 114), but thenceforth it extended in lengths of 1.3.<sup>29</sup> I have drawn it accordingly. At the same time, it is clear from Dinsmoor, fig. 43, that the joints on the front by no means coincided with those on the rear, and that the cover tiles of the roof were aligned on the rear joints. I assume, I believe with reason, that the

<sup>24</sup> Dinsmoor, in *AJA* XLIII, 32. But I am not quite sure of this figure, as Dinsmoor may be measuring not from the *corona* but the rim of the 'pedimental step'.

<sup>25</sup> See below, p. 86.

<sup>26</sup> For a slight difficulty in the evidence for Sounion, which does not, however, affect the main lines of the structure, see below, p. 86 and note 53.

<sup>27</sup> Dinsmoor, 84. I use the term 'plinth course' of any wall-course between the orthostates and *epikranitis*, thus departing from Robertson, who uses it of the course sometimes found between the *toichobate* and orthostates, and called by Dinsmoor (42) 'the moulded wall-base'. Robertson agrees that the courses above the

orthostates were originally of mud-bricks or 'plinths' as in the Olympian Heraion (Robertson<sup>2</sup>, 62), and I think it best to confine the term 'plinth' in Greek Architecture to these courses.

<sup>28</sup> The system is best understood by studying Cockerell, *Aegina and Bassae*, especially the beautiful drawing on Bassae, pl. VII. See also *The Unadorned Antiquities of Attica*, ch. VI, pl. XII.

<sup>29</sup> The central joint of the flank *sima* was in line with that of the *geison* (Dinsmoor, 114). Measuring from this to one corner, one obtains a total of  $12 \times 1.299 + 0.67$ , or 16.26. This, with a discrepancy of less than one centimetre, is the length of half the flanking *geison*.

dowel-holes, 1.3 apart on the surface of the *geison* blocks, indicate the spacing of the rear joints; and thus I have restored a roof of pantiles each 0.65 (or half a length of flank *sima*) by 0.65, the visible joints of whose *sima* blocks were aligned with the centres of the triglyphs, while the rear joints fell outside them. A possible defect of my arrangement is the large overlap between front and rear near the outer corners. But I do not believe this a very difficult construction. We have apparently so few fragments of *sima* that we cannot tell whether the overlap varied. A great advantage of my arrangement seems to me the square pantiles. Nor does it appear to disagree with the data in Dinsmoor. I am conscious I have not fully understood these pages in Dinsmoor. I cannot see, for instance, where he draws his evidence for the two rows of two wider pantiles in the centre: and he gives no analogy for this remarkable and perhaps objectionable detail. He observes (116) that 'the fifty rows of pantiles would comprise two central rows of 0.694 m., then on either side twenty-three rows of 0.6495 m., and the raking *simai* on the façade gables'. Our disagreement, then, concerns only the lengths of the pantiles and the visible joints of the flank *sima*. I believe that his fig. 43 shows a fragment of *sima* from the right half of either flank.

The section of the flank *sima* (G), wrongly shown as of a late, bulging form in many text books (e.g., Spiers, *Orders*, pl. III), was of the Corinthian-Attic type and is figured in Dinsmoor IX, fig. 16.<sup>30</sup> I have restored the ends of the alternate cover tiles on the analogy of Rhamnous.<sup>31</sup>

The *akroterion* holders stood very near the corners. Their dowel-holes are on an average only 0.12 from the face of each *geison* (Dinsmoor IX, 36).

#### *Flooring of Peristyles.*<sup>32</sup>

For this I follow Dinsmoor, 57-65. The jointing of the east floor and the two side floors follows that of the stylobate. The east floor contains three rows of nine slabs from north to south stylobate, of which the east has a width of 1.162, the central of 1.309, the west of 1.325 (Dinsmoor). The total length of the side floors equalled that of the toichobate. Each was divided into two rows of slabs 1.291 × 0.86. The most westerly pair of each floor were, however, 1.96 long (Dinsmoor). The west floor contained three rows of nine tiles each, the rows being each 1.02 wide (Dinsmoor).

#### *The Two West Thranoi* (H).

This is the name I give, following Orlandos,<sup>33</sup> to the cross-supports for the ceiling beams between the west and side peristyles. They were carried across

<sup>30</sup> The fragment appeared too late (cf. Dinsmoor, 119, n. 258) for Miss Shoe's exhaustive study, *Profiles of Greek Mouldings* (1936).

<sup>31</sup> See below. <sup>32</sup> For this term, see above, n. 4.

<sup>33</sup> He uses it of those at Sounion in *AE* 1917, 223, fig. 18, while in *BCH* 1924, 316-7, he uses the term of the whole *epitranitis*, both of the *cella* and the flanking colonnades. This is reasonable.

the latter from the two western corners of the *opisthodomos* at the level of the *epikranitis* and the upper ten or fifteen centimetres of the frieze backers. I calculate their width in the Hephaisteion as 0.55, from Stuart and Revett, plate X. They are thus twice as wide as the plinth courses of the west *antae*-returns, a fact that greatly concerns us in restoring the west *antae* of Sounion and Rhamnous.

*Ceilings of Peristyles.*

Span of east peristyle: about 4 (converted from Stuart and Revett, pl. V).

Span of west peristyle: about 3.17 (converted from Stuart and Revett, pl. X).

Span of either flank peristyle: 1.825 (both by calculation from Stuart and Revett and a measurement of Travlos).

Height of beams to top of crowning moulding: 0.228 (Travlos).

Width of beams: a little over 0.5 (converted from Stuart and Revett, pl. IV).

Interaxial spacing of beams: 1.4 (by the same method). The unit, then, is not observed.

The ceiling coffers are hollowed out of marble blocks, each with four or six coffers (Stevens, *AJA* XV, 23). There are ten coffers in each bay of the side peristyles, except only the east bay of the south, where there are eight. Misled by Bates (*AJA* V, 38) I drew these eight too large. They are individually of the same size as the others, as I found too late on inspecting the building. Each bay of the east peristyle contains twenty, of the west sixteen coffers. The most convenient plan of the whole ceiling is given in Perrot and Chipiez, VII, 527.

*Flank Walls of Cella Buildings.*

Height of toichobate: 0.358 (Dinsmoor, 41). Thickness: 0.91 to 0.95 (*ibid.*). This is only just visible in the building, and I have not shown it in my drawing.

Height of secondary wall-base (K),<sup>34</sup> with Ionic moulding on outer face: <sup>35</sup> 0.202 (Dinsmoor, 43).

Height of orthostates and backers (L): 0.87. Combined thickness: 0.77 (from the wall-thickness of 0.76, given by Dinsmoor, 38).

<sup>34</sup> Robertson's 'plinth-course'. See above (n. 27).  
<sup>35</sup> This moulding was not continued internally even in the *opisthodomos*, where it would have been visible. But like Stuart and Revett I have carried it round the inner faces of the *antae*. At present it stops on either side about two-fifths of the way along them (Dinsmoor,

figs. 19 and 34). But the profile of their west faces (fig. 19) seems to show it once extended as far. It was perhaps interrupted by one of those mysterious 'sills' certainly present at Sounion (PLATE 8 to this paper) and restored by Dinsmoor (fig. 34) in the Hephaisteion.



The stones in all these courses, instead of observing, with the 'plinths',<sup>36</sup> the unit of 1.243 (Dinsmoor, 43), have very varying lengths. I have represented Dinsmoor's lengths in my drawing. He gives tables as follows: for the toichobate, on p. 41 (n. 101); for the secondary wall-base, on p. 42 (n. 103); for the orthostates, on p. 44 (n. 106).

The plinth courses (M) are nearly isodomic. There are nine between the orthostates and the level of the epistyle soffits. The seven lower average 0.51, the two upper 0.49 in height. Of the four above epistyle level, the two lower average 0.42 and the two uppermost 0.404. The *epikranitis* is another 0.207. I take my figures from Dinsmoor, 74, n. 157. The length of blocks averages 1.243. The terminal blocks are alternately of one and one and a half lengths, and the inner ends of the shorter thus fall about 0.25 beyond the backs of the internal faces of the *antae*.<sup>37</sup> The outer returns of the west *antae* are 0.45 at the base and only 0.23 on the plinth courses, as measured on Stuart and Revett, pl. X.

For the joints of the outer *epikranitis* (N), much of which survives, I have no definite figures. The inner is fragmentary, except in the *opisthodomos*, where is a joint on the middle of the west side (Stevens, *op. cit.*, figs. 1 and 2). Its moulded portion lacks the lower roll of the outer *epikranitis*.

#### *Pronaos* (O).

Internal width, 6.23. This is clear, for the walls are 0.76 thick, while their distance from centre to centre is 6.99 (Dinsmoor, 38). The depth, from the outer *anta*-face to the outer face of the east cross-wall, is 4.935 (Dinsmoor, 56).

The intervals across the front of the *pronaos*, between the axes of the peristyle columns, the *antae* and the columns of the *pronaos*, show no clear interrelation, measuring as they do about 2.80, 2.25, 2.50, 2.25, 2.80. This contrasts with Sounion, where all are equal, and Rhamnous, where they follow the external colonnade.

I have restored the floor, following Dinsmoor (62-3), as three rows of five slabs each, aligned horizontally with the toichobate; the ceiling to correspond with that of the *opisthodomos* as restored by Stevens.

#### *Opisthodomos* (P).

Depth, 3.73. The floor was probably aligned with the toichobate, not sunken, as I have shown it. The conclusive restoration of the ceiling by Stevens gives the beams a width of 0.49 and an axial spacing of 1.332, and each bay a set of fourteen coffers.

<sup>36</sup> See above, n. 27.

<sup>37</sup> I have calculated this from Dinsmoor, 41. He is giving lengths for the toichobate block: his figures for the east end are simple. 1.186 minus 0.097 gives the

length of the *asta*, 1.09. Emending his figure of 1.175 for the west end to 1.175, one finds that 1.175 minus 0.088 gives an identical length, 1.09, for the west *anta*.

*Door to Cella.*

The length of the threshold was clearly 3.81 (Dinsmoor, 53). Following Dinsmoor, fig. 34, I have made the opening about 2.4 wide. This is uncertain, and I would now prefer to make it rather wider, say 2.7. This, the width at Sounion,<sup>38</sup> would better suit the presumed height of our door. Periclean architects often placed their door lintels at epistyle level, for instance in the Parthenon.<sup>39</sup> This would give our opening a height of 5.4: and Mr. Hill tells me that he has found definite confirmation of this. The recesses in the side walls show that not only the lintel but its prolongation in the cross-wall occupied the space of two courses, was constructed on the 'orthostatic' principle, and fitted into the side walls in the way my illustration shows. I doubt whether the opening would have followed the slender Vitruvian proportions, of 12 to 5½ for Attic and Doric doors, and was consequently as narrow as 2.5.

The cross-wall was 0.808 thick (Dinsmoor, 57). The actual door sill is 0.865 thick (Dinsmoor, 54, n. 120), but its western face is aligned with that of the orthostates. It is clear, in fact, from Dinsmoor, 53-4 and fig. 36, that the door jambs projected, if at all, only into the *pronaos*.<sup>40</sup>

*The Cella (Q).*

This was 12.145 long (Dinsmoor, 57). The west cross-wall is thus only 0.76 thick (Dinsmoor, *ibid.*). Its orthostates are again quite irregular, and again I have followed Dinsmoor's table (47 and 48). For the internal colonnades I have followed Mr. Hill, whose discussion of them I saw before it was published. There was the usual Periclean colonnade across the back of the *cella*: and the one surviving epistyle block, Dinsmoor fig. 33, is from the corner of this and the north colonnade. The notch and tongue are evidence that the joint, being diagonal, was 'joggled' as elsewhere at the inner angle. The width of the block is preserved, and also the length from the joggle-joint to the axis of the next column. Adding half the former to the latter, we obtain an intercolumniation of  $0.257 + 1.295$ , or about 1.55. We thus obtain, over the same length as that in Dinsmoor, fig. 34,<sup>41</sup> a line of seven columns, the axis of the western 1.47, of the eastern 1.15 from the faces of the cross-walls. The west colonnade will have three intercolumniations, each of about 1.53. The columns were Doric, arranged in two tiers. The east cross-wall binds more deeply with the side walls at the sixth plinth course. Dinsmoor explains

<sup>38</sup> See below, p. 92.

<sup>39</sup> See Penrose, pl. XVI.

<sup>40</sup> The arrangement at Sounion was the opposite. There the door projected, if at all, towards the *cella*. See below, p. 93.

<sup>41</sup> I have nothing to add to the evidence of Stevens' scratch (Dinsmoor, 91), which seems to me on the whole persuasive. With the presence of a west colonnade, one can understand the excess of the most westerly space (1.47) over the most easterly (1.15).

this (76) as a strengthening of the cross-wall to receive the lower epistyle. While it is possible mechanically to align this with either the sixth or seventh course, it is now artistically preferable to place it in the sixth.

Finally, it seems better to have the base of the cult statue more centrally spaced than on Dinsmoor's plan.

With this I leave the Hephaisteion. Although we know more of it than of the other two temples, we cannot explain its preservation. On one modern, popular view, Athens west of the 'Valerian Wall' was all abandoned in the third century A.D. to the Goths and Herulians: which would explain the good condition of the Roman Fora and the ruin of the Periclean City, but not the ill-rewarded survival of the Hephaisteion into an age of Piraeus railways and unprincipled critics. Its general condition last year abundantly justified, to the superficial, the strictures of Mr. Lancaster.<sup>42</sup> Athens was lovelier, artistic judgment surer in the days of Wordsworth and Lethaby.

## PART II

### THE TEMPLE OF POSEIDON <sup>43</sup>

(PLATE 8)

The conspicuous temple on Cape Sounion, a further butt for Mr. Lancaster,<sup>44</sup> has received serious study in several works since the standard publication by Blouet. I have consulted the following accounts.

Blouet, *Expédition Scientifique de Morée*, III (1838), plate 30 H. This completely supersedes *Unedited Antiquities of Attica* (1817), 53-6.

Dörpfeld, *AM* 1884, 324-37 and plates XV-XVI.

B. Stais, *AE* 1900, 113 ff. and plate VI (a plan of the temple area); 1917, 168 ff. The guidebook to Sounion, also written by Stais, adds nothing of importance for my work.

J. G. Frazer, *Pausanias's Description of Greece*, Vol. II, 2-4. Frazer gives a good but not an exhaustive bibliography, for he omits Blouet.

A. Orlandos, *ADelt* 1915, 1-27 (on the roof and pediments).

A. Orlandos, *AE* 1917, 213-26 (on the remainder of the temple). I shall henceforth refer to these two very important papers as *AD* and *AE* simply.

<sup>42</sup> 'The so-called Theseon' (*sic*) . . . 'supremely uninteresting in itself . . . Why should this temple, the best preserved of its date in the world, built within a few years of the Parthenon, and embodying all the same principles, remain by comparison so devastatingly boring?' (*Classical Landscape*, 47.)

<sup>43</sup> The correct dedication is due to Dörpfeld's identification of the temple of Athena; see *AE* 1900, 122 ff.

<sup>44</sup> 'Indeed, from the motor road it appears, when silhouetted against the sun, remarkably like a half-finished hangar.' (*Op. cit.*, 87.)

Van Buren, *Maps and Plans to illustrate Pausanias* (1930), 22-3.

I. H. Grinnell, *Greek Temples* (1943), 38-9 and plates XXXV-VI.

There are valuable notices in Robertson, *Greek and Roman Architecture*,<sup>46</sup> especially on p. 328, and Dinsmoor has published accurate measurements of many features, especially in *Hesperia* IX. I shall continue my formulae for quoting Dinsmoor.

#### *Material and Technique.*

From the *euthynteria* to the *akroteria* the temple is of the coarse-grained Agrileza marble, quarried locally (Frazer, *op. cit.*, 2). The softness of the marble may explain the absence of *entasis* and the fewness of the flutes on the columns.<sup>45</sup> The horizontal clamps I saw were all of the H form, much elongated. Except for the epistyle backers, dropped from above, the blocks were lifted into position from the sides.

#### *General Dimensions.*

Length and breadth of *euthynteria*:  $32.8 \times 15.2$ .

Length and breadth on stylobate:  $31.15 \times 13.4$  (Frazer, 2; Robertson, 328).

Length and breadth on *corona*:  $31.85 \times 14.15$ . From AD, fig. 3 one obtains a breadth of  $14.14$ .

Height, from bottom of lowest step to apex of raking cornice:  $10.91$  ( $= 3 \times 0.36 + 6.14 + 2.0 + 1.44 + 0.25$ ).<sup>48</sup>

Length of *cella* buildings at toichobate level:  $21.20$  (Dörpfeld, pl. 15; Robertson, 328).

Width of *cella* buildings at toichobate level:  $8.318$  (Dörpfeld, pl. XV) Robertson's figure of '6.9.00' cannot stand.

The unit:  $1.26$  (Dörpfeld). Stais gives  $1.26-7$ , Blouet  $1.25$ .

These dimensions are for a temple of thirteen columns on the long side, such as I have restored. Blouet had restored one of twelve.<sup>47</sup> But Dörpfeld virtually compelled one to believe that the marble building followed the foundations of its late archaic poros predecessor. One must assume that in both temples the more important east peristyle, treated in the later to an Ionic frieze, was shallower than that to the west. Sounion here differs sharply from the Hephaisteion and Rhamnous. A side colonnade of twelve columns, while

<sup>45</sup> Refinements, however, perhaps existed. Dörpfeld believes he has detected an outward and downward tilt of the stylobate blocks, rectified under the columns by a device which he seeks to identify with the *scamilli impares* of Vitruvius. See p. 328 of his article. I have nothing to say on this discovery.

<sup>46</sup> Each of these figures will be found under the appropriate member below.

<sup>47</sup> Grinnell restores thirteen flanking columns on her plan, *op. cit.*, 38, but only twelve on her elevation, pl. XXXV, which she takes from Blouet, pl. 31. Her text ignores the problem.



*The Euthynteria.*

Height: 0.215 (0.22, Blouet). The upper 0.105 is smoothed, and the next 0.09 mostly stippled.<sup>54</sup> The lowest 0.02 is polished.

Projection: 0.10.

Stretches of this course survive on east and south. The joints on the whole follow those of the middle step. The three blocks at the south east corner have vanished, leaving a gap of 2.605 on each side. I believe the two faces of the corner block exceeded the unit.

*The Lower and Middle Step.<sup>54a</sup>*

Height: 0.36.

Projection, from inner to outer edge of the tread: 0.395.

The lower 0.10 of both steps are slightly undercut, and the innermost 0.07 of the treads of both form a continuous shallow trough, with a smoothed floor. Between the lower hollow of 0.10 and the overhanging face of 0.245 is a beautiful cavetto moulding (Shoe, *Profiles of Greek Mouldings*, pl. LXIII, 10), quite invisible from all ordinary viewpoints. The overhanging face is divided into three bands: the uppermost, polished, of 0.035; the middle, stippled except near the joints, of 0.18; the bottom, polished, of about 0.03. The stippling certainly reminds one of the *cella* walls in the Hephaisteion, left unfinished and originally plastered over. But a close parallel is perhaps afforded by the steps of Bassae; and I consider that both there and at Sounion the small broken projections are intentional and artistic. Cockerell, commenting on such steps, as he shows them in *Bassae*, pl. VI, observes that 'the face is still slightly raised and left rough from the tool of the quarry-man', and that this was 'doubtless calculated to give expression to the work'. At any rate, they resemble the unfinished work neither of the Propylaea nor of Rhamnous, whose patently unfinished steps I have shown in my illustration, PLATE 9.

For the joints of the vanished corners I again followed what I considered probable, and was glad to discover later the analogy of Bassae.

*Stylobate.*

Height: 0.36 (0.37, Blouet).

Depth of blocks: 1.170 (Blouet). The inner stylobates of *pronaos* and *opisthodomos* appear slightly deeper on the plans of Dörpfeld and Stais.

Length of corner blocks and their immediate neighbours:—this can be determined only by the angle intercolumniation, best found here on paper

<sup>54</sup> Only for 3 cm. on each side of the vertical joints is the surface always smoothed in this and the two courses above.

<sup>54a</sup> These are exact twins.

from the edges of the *euthynteria*. All has been done by Dörpfeld, who on pl. XV makes the angle intercolumniations each 2.38, 0.14 less than the normal. Hence from the axis of the second column to the outer corner of the stylobate was a distance of  $2.38 + 0.505$  (half a lower diameter)  $+ 0.05$ <sup>55</sup> = 2.93. The first 0.63 of this belonged to a regular block. I have divided the remaining 2.30 into corner blocks of 1.26 square with re-entrants at the inner corners, and adjacent blocks 1.04 wide.

The whole stylobate is polished smooth.

#### Columns.

Total height: 6.14 (Blouet, pl. 33).

Lower diameter: 1.02 (myself). Blouet and Dörpfeld both give 1.01. Dinsmoor, as we shall see immediately, must have measured over 1.04.

Upper diameter: 0.79 (Blouet).

Width of *abacus*: 1.13 (Blouet).

Height of *abacus*: 0.196 (Blouet).

Height of *echinus*: 0.18. Blouet obtained 0.177.

These columns, as is well known, have no *entasis* and only sixteen flutes. The necking-band, if it existed, was unpronounced.<sup>56</sup> Each shaft below the capital-block is of nine drums, except only the original central shaft on the south side, whose four lower drums fill the height of five in the others. So while the normal drum averages  $0.62 \left( \frac{5.6}{9} \right)$  in height, these four average a quarter of  $0.62 \times 5$ , or 0.78. Drums lying to the north of the temple show there were other columns similarly divided, perhaps one in the centre of the north side (as in my drawing), perhaps others at the corners. This is a different matter from the numerous minor variations, of about 5 cms. either way, well seen on Blouet, pl. 35.

#### Spacing of Columns.

With a unit of 1.26 and a lower diameter of 1.02, one obtains a vacancy between shaft and shaft of 1.5 (2.52 minus 1.02), which gives void an excess over solid of 0.48. This is very near Dinsmoor's average of 0.49 for Periclean temples (for which see above, p. 71). But Dinsmoor gives an excess for this temple of only 0.436, obtained only with a column over 1.04 in diameter (2.52 minus 1.04 = 1.48, and 1.48 minus 1.04 = 0.44).

In *Hesperia* IX, 22 he gives the exact figure, 1.043, for the lower diameter, but I cannot understand it. For my own part, I follow his figures for the

<sup>55</sup> The distance from the outer edge of the column to the outer edge of the stylobate.

<sup>56</sup> See above, p. 71, n. 17.

Hephaisteion and dissent from those for Sounion. We have now found two Greek temples whose most easily recorded feature, the intercolumniation, seems undecided.

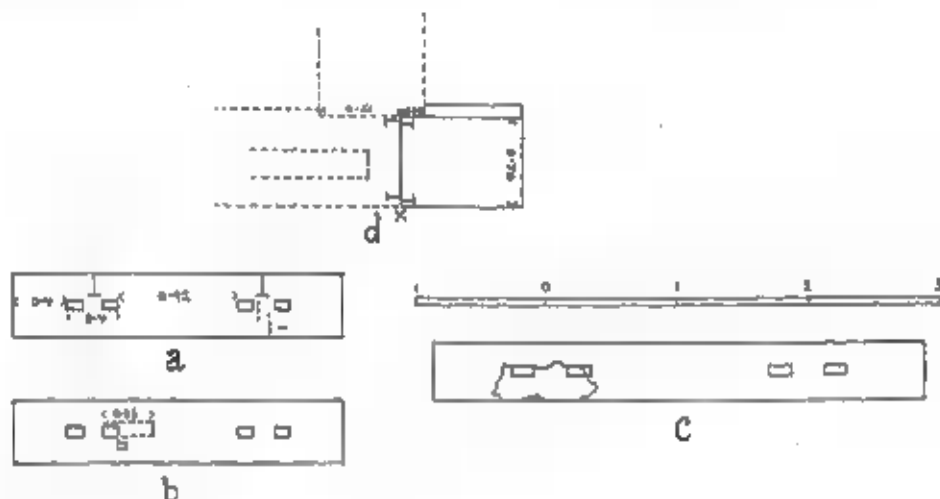


FIG. 1.—(a) TOP SURFACE OF EPISTYLE BLOCK, SOUNION.  
(b) TOP SURFACE OF EPISTYLE BLOCK, SOUNION.  
(c) FRAGMENT AND RESTORATION OF TOP SURFACE OF DOOR LINTEL, SOUNION.  
(d) PROPOSED RESTORATION OF NORTH CROSS-THRANGS, SOUNION (PLAN).

### *Epistyle.*

Height: 0.836 (Dinsmoor IX, 21).

Width of soffit (including backers): 0.95. This is also Blouet's figure (pl. 35). This figure, combined with a lower diameter for the columns of 1.04, would give the temple a proportion noticeably different from those of the Hephaisteion. 0.95 and 1.01 would give one more suitable to its assumed date in the fifth century.

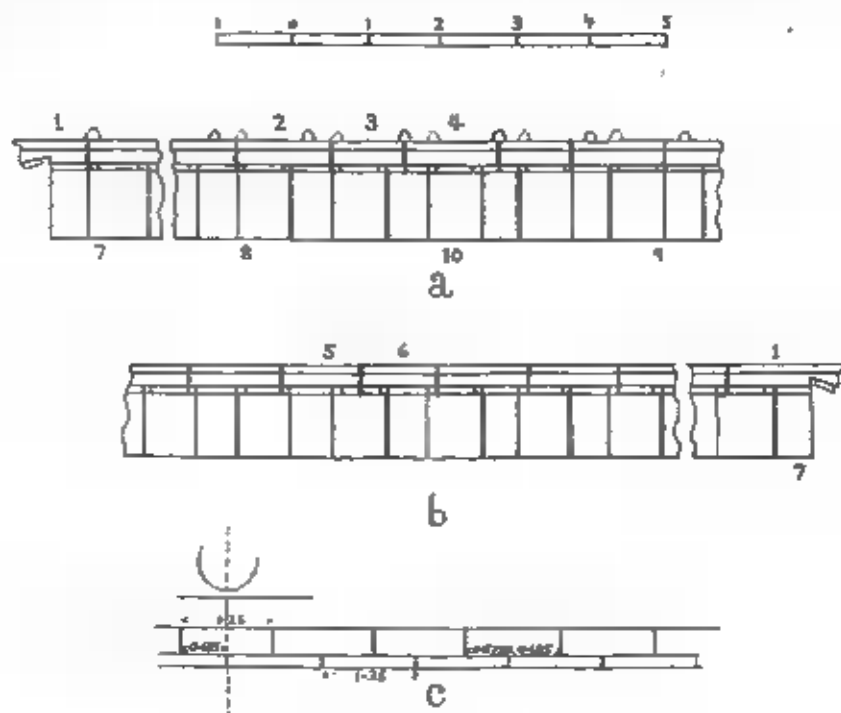
### *The Blocks.*

Blouet for the corner blocks reverses the system of the Hephaisteion. On pl. 32 he prolongs those of the long sides to the corners. At the same time, his pl. 30 shows that nothing of the east or west façades was standing even in his time. His arrangement would be very abnormal,<sup>57</sup> and is obviously less artistic. The restoration of the jointing in the whole entablature depends, I believe, on the view, firstly, that the epistyle was normally constructed, secondly that Orlandos' *geison* block AE, fig. 20, presumably from the south-west corner, had its longer side on the west façade. While neither the Hephaisteion nor Rhamnous, both of whose corner *geison* blocks were square, provides an

<sup>57</sup> The temples of Aphaia, Hephaistos, Poseidon (Præstium) and 'Concord' (Atrageas) all oppose it.



analogy, it does seem morally certain to me that this block was in the position Orlandos gives, and hence longer on the façades.<sup>58</sup> It is reasonable to believe that the frieze blocks broke joint and that their corner block, which measured one triglyph by one triglyph and one metope, was placed with its shorter side on the façade (where, of course, the triglyph would mask the joint). After examining surviving blocks of the frieze and *geison*, I found it best to arrange them on the system of FIG. 2a and b; *a* representing the flanks, *b* the façades.<sup>59</sup>



ensures that jointing is well broken with the epistyle also. My only difference from Orlandos is the shortening of the corner *geison* block on the flanks by one *via*. Compare my FIG. 2a and AE, fig. 20.

While the epistyle blocks, like the *geison* blocks and at any rate the front blocks of the frieze, were lifted from the sides by horizontal bars, every backer was dropped vertically into place by claws, fastened in pairs into each end of the upper surface. I have drawn the holes for the claws and their relation to the cross-clamps in FIG. 1a. Their spacing leaves room for the mitre of the corner backers.

#### *Frieze.*

Height: 0.829 (Dinsmoor IX, 21).

Width of metopes: 0.75.

Width of triglyphs: 0.51 (thus half a lower diameter).

There were no separate slabs for the metope faces. So far as I could judge, the blocks were originally as thick as the epistyle blocks, not so thin as they are represented in AD, fig. 13. I have already given my system of jointing for them.

I identified none of the backers. They were nearly the height of the orthostates, which makes for confusion. The dowel-holes on the epistyle blocks seem to show they were irregular, and followed the system neither of the Hefphaisteion<sup>80</sup> nor of Rhamnous.<sup>81</sup> For those interested I have given the evidence of two epistyle blocks, in FIG. 1a and b. Unhappily I did not record all I should have done of the second, which is very imperfect. The dotted rectangle, 0.38 long, is a depression 0.35 deep and 0.11 wide. I do not understand it. I greatly hope that someone with the means and the time will examine the surface of all these epistyle backers.<sup>82</sup>

#### *Geison.*

Height, to top of *corona*: 0.39 (Blouet, pl. 33).

Projection of *corona* from front plane of epistyle: 0.41 (Blouet).

I have shown the jointing of the blocks in FIG. 2a and b. For the pedimental floor I follow Orlandos' clever and convincing reconstruction. Each block extended the whole thickness of the entablature and so contained a section of *epikranitis*.

#### *Pediment.*

I have followed Orlandos throughout. My measurements are all from him. The front plane of the tympanum is that of the epistyle. It is thus inset about

<sup>80</sup> See above, p. 72.

<sup>81</sup> See below, p. 101.

<sup>82</sup> One also awaits a plan of the site that records the

present position of all the surviving blocks now lying round the temple, and that numbers the more important. I had not the time or instruments for this.

1.41—a figure given also by Dinsmoor in his table, *AJA* 1943, 32. The greatest height of the tympanum is 1.44 (1.45, Dinsmoor); the vertical height of the raking cornice between 0.25 and 0.3. The angle of pedimental slope is only  $13\frac{1}{2}^{\circ}$ .

The pediment seems to observe its own unit, slightly smaller than the main unit, though as close to it as possible. While the block at the apex, which includes a small part of the tympanum as well as the raking cornice, is 1.26 wide, the eight central blocks of the tympanum below are each 1.23 wide. Outside these, in turn, is a half block about 0.6 wide, then a block, combining tympanum and raking cornice, of 1.23, and finally the corner of the pediment, which forms an upward projection from the horizontal corner block and measures horizontally 0.32. Added together, these figures give the pediment a total width of  $9.84 + 1.2 + 2.46 + 0.64$ , totalling 14.14.

The blocks of raking cornice, where possible, observe the shorter unit, and the tympanum backers are slabs, the exact doubles of the tympanum blocks. While the horizontal *geison* blocks are 1.42 deep from back to front, those of the raking *geison* are 1.28 (cf. *AD*, fig. 7).

### *The Roof.*

The ridge beam was grooved into the pediment, as in the Hephaisteion. The inner edges of the purlins seem to have been less than 6.0 apart. Orlandos puts them a fifth of the way along the third tympanum blocks from the central join, and I took care to confirm *AD*, fig. 5, where he does so. But this gives a mere 5.5 for the distance between them ( $4 \times 1.23 = 2 \times 0.246$ ). Yet one would like to believe they were supported by the *cella* walls, whose inner faces, according to high authority, are 6.3 apart.<sup>63</sup> They were tilted outwards.

I am as uncertain of the tiles. The raking *sima* blocks Orlandos found to be 0.65 long. This gives the sloping length of the pantiles. On the flanks of the temple, the continuous *sima* was returned round the *akroteria* and then abandoned in favour of antefixes. Now Orlandos<sup>64</sup> places the first antefix over the first *via*, between the first and second mutules. To do so he has to assume a row of very narrow pantiles between the tiles of the raking *sima* and the ordinary courses. It is, moreover, unusual at this time to have antefixes over the *vias* and not the centres of the triglyphs. Finally, Orlandos must assume an antefix over every *via*, or his scheme will not work. FIG. 2a, where I have dotted in antefixes over alternate *vias*, makes this quite clear. But all Periclean analogy, e.g. that of the Parthenon, is for antefixes before alternate

<sup>63</sup> So Dörpfeld and Stais. While in my illustration I have followed them, in my own measurement I consistently fell short of their reckoning by as much as 0.15. As my measure was short (only 1.5 in length), I

set aside my own reckoning. Only when I came to draw the pediment was I faced with the problem of the purlins.

<sup>64</sup> *AD*, fig. 13.

rows of cover-tiles. If we place antefixes in their normal position, over the centres of the triglyphs,<sup>65</sup> all such difficulties vanish, and one has also a convenient distance of three pantiles from the corners of the pediment to the middle of the first triglyph, 1.93, almost one and a half times the unit. But why should Orlandos have adopted his scheme? I have only lately seen its difficulties, and therefore never examined the *geison* blocks for evidence: and the picture of my restored temple unquestioningly follows Orlandos.

### *The Akroteria.*

For the bases I follow Orlandos in *AD*, figs. 3, 7 and 16. The central *akroteria* I drew and measured myself from the surviving example in the National Museum, and am greatly indebted to Mr. Karouzos for the help he gave me with it. It is of Agrileza marble, which precluded the customary perforation found, for instance, on the *akroteria* of Aegina and the Parthenon. At its greatest it is 1.35 high and 0.63 wide, and so not far removed in its relation to the pediment from the temples of Hermogenes (e.g. Magnesia, Robertson,<sup>2</sup> fig. 68) or even from the prescriptions of Vitruvius.<sup>66</sup> Its support is 0.125 wide, 0.07 thick. For the corner *akroteria* one has to rely at present on Orlandos' drawing (*AD*, fig. 18), as the fragment has been mislaid.

### *Floors of peristyles.*

I begin with the flank peristyles, some of whose floor blocks survive *in situ*. They broke joint exactly with the stylobate. They are in double rows, each pair 1.26 long and 1.42 wide. The other floors must be inferred. The system for the east and west floors, so nearly of the same size (3.75 and 3.9), must, I think, have been the same. Now the flank arrangement should have continued at least to the joint between the east *anta* and the third column. But from there to the east stylobate is 4.2. So I have prolonged the side floors by three pairs of slabs over this distance, (1) because there can be no joint between the east front of the *anta* and the side colonnade without a serious alteration in the size of floor blocks, (2) because my arrangement would keep the size fairly constant (1.40 for the length of block instead of 1.26), (3) because Rhamnous has an analogous arrangement and (4) because the remaining space I leave to be filled in the east peristyle will be  $8.3 \times 3.75$ , which gives five rows of six slabs each and individual dimensions for each slab of 1.38 by 0.75: in my drawing I gave four rows, but I now prefer five. I have thus secured a near equality of all the floor blocks in the peristyle.

<sup>65</sup> I draw them in this position on fig. 20, in firm lines. On the other hand, there was no centring over triglyphs at Aphaia, where each antefix surmounted a via. See Bagnall and Atkinson, *Theory and Elements*,

fig. 86 (from Cockerell).

<sup>66</sup> III, 5, 12: the centre *akroterion* to be one eighth higher than the tympanum.

Before I continue with the peristyles, I must try to settle the various levels of the *epikranitis* throughout the building. It is clear from *AE*, fig. 17 N and O that the *epikranitis* both inside and outside the cella walls was formed of single blocks, and that the side towards the peristyle was 0.11 higher than the *cella*; <sup>67</sup> but, on the other hand, it is clear from 17 Z that at least one of the end peristyles had a ceiling level with that of *pronaos* or *opisthodomos*. The width and form of block ■ show that it can come only from the entablature of a colonnade.<sup>68</sup> Where do we incorporate these different blocks?

My first attempt, which I now think wrong, I have embodied in my main picture. In it I put the east peristyle, the *pronaos* and *opisthodomos* and the *cella* all on the lower level; and I have allowed a wider shelf on the lower level for the sides of the *cella*, where the end of the wooden ceiling beams would need to rest. I have placed the block shown in firm lines on fig. 1d at the south-east corner of the *opisthodomos*. For the blocks of the *pronaos* I have tried to observe the unit, but rather unsuccessfully.

The whole restoration depends on depressing the east peristyle. Now one can do this only by lessening the Ionic frieze or the *epikranitis*: for the epistyle observes the customary height. But the frieze also is as high as the outer frieze. 'Bei verschiedenen Breiten haben die Platten alle dieselbe Höhe (0.825 m.) und ungefähr gleiche Dicke (0.28-0.35 m.)', observes Fabricius in *AM* 1884, 345; and Blouet gives the same measure. So I was compelled to depress the *epikranitis*. In the Hephæsteion, however, the *epikranitis* over the Ionic frieze is as high as that elsewhere. I have shown this in my own picture, and refer the reader for the details to the beautiful plates of Stuart and Revett.<sup>69</sup> I have completely revised my view of the *epikranitis* at Sounion and show it as I now think it was in fig. 3. Only the *cella* now appears as lower than the rest. It was differentiated, I think, both by this and by alone possessing a wooden ceiling.<sup>70</sup> In fig. 3 I have moved the block fig. 1d to a place over the eastern cross-wall; but in doing so I began to doubt whether fig. 3 after all is right.

<sup>67</sup> How, with the fragmentary remains of the *epikranitis*, could one tell which side faced the *cella* and which the peristyle? I presume, from the marks on one side for the peristyle's marble ceiling beams and their correspondence with the *geison* blocks' marks. Here again I have to accept Orlandos' conclusion of 1917. At Rhamnous (see below, p. 104) the *cella* was probably higher than the peristyles.

<sup>68</sup> With some perversity I have strained in my drawing to make the inner shelf of the side wall's *epikranitis* equal to that of the entablature's. The latter was much wider, as *AE*, fig. 17 shows. I must leave this uncorrected, as the measures are too small for tidy correction.

<sup>69</sup> Vol. III, ch. I, plates IV and VIII.

<sup>70</sup> In this, presumably, the *cella* of the Hephæsteion

resembles it. Dörpfeld asserts it as a rule that all semi-internal chambers in classical Greek buildings could be ceiled in marble, and that these included *pronaos* and *opisthodomos* with open colonnades on one side, but that genuine internal chambers must be roofed in wood. See *AM* 1883, 155. I can see no reason for this rule; and of course chambers elsewhere, when without peristyles, were sometimes ceiled in marble, as, for instance, the famous example near Emporio on Santorin (Hiller, *Thera* I, 306-7). I must, however, add that I am greatly indebted to this article of Dörpfeld on Philo's Arsenal. I have borrowed from it all my proportions for the rafters and cross-lathes of Greek temples; and on p. 151 it supports my nomenclature for 'plinth courses'.

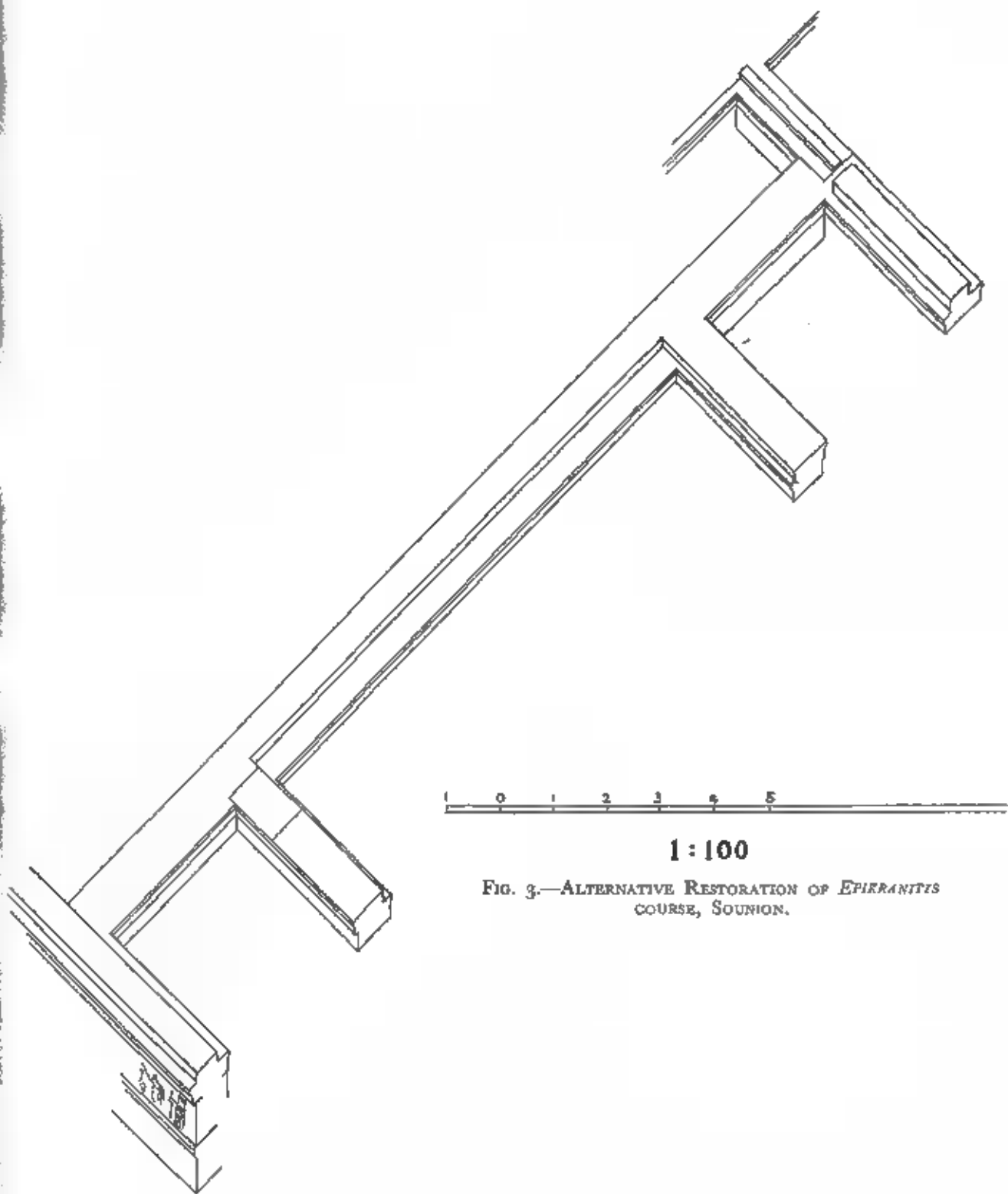


FIG. 3.—ALTERNATIVE RESTORATION OF *EPIERANITIS*  
COURSE, SOUNION.

It is this block, I find, which would fit so admirably into a shorter temple without *opisthodomos*. The *epikranitis* at the higher level seems to continue all the way along its front. I was morally certain, on inspecting the block, that the moulding continued to point X on fig. 1d, and did not stop 18 cms. from it, as on the other long side of the block. If we put it on the back of the *cella* as a block adjacent to the north cross-*thranos*, and if, in order to do so, we omit the *opisthodomos* from the temple, we obtain the very satisfactory arrangement of fig. 1d, where cross-*thranos* and *cella* wall are shown by dotted lines. The slight jog in the clamps is easily explained. The north *thranos* does not survive, so fig. 1d exactly reverses the south *thranos*. If we must have our *opisthodomos*, however, we can obviously fit our block, with its probably continuous moulding on the higher side, into the restoration of my main picture, but not so easily into fig. 3. We need more evidence for this course.

#### *Ceilings of side peristyles.*

I have to follow Orlandos completely. I saw numerous fragments of the ceiling beams, 0.372 broad, which are figured in *AE*, fig. 22. In this publication Orlandos records that he saw the planes on the *geison* blocks for their reception. He gives the following measurements: 0.235 for height of beams to crowning moulding; 0.372 for width of beams; 0.782 for interaxial spacing (relatively far narrower in proportion to the beams than any other instance in these temples); 1.56 for the span of either peristyle.

The two cross-*thranoi* were 0.53 high (of which 0.215 was *epikranitis*), and 0.705 wide at the soffits. They extended 0.615 inside the line of the *cella* walls' exterior. See *AE*, fig. 18.

#### *Ceilings of east and west peristyles.*

I believe both halls were ceiled identically. Considering the great span of both, Orlandos seems right to assign the sole more massive beam partly surviving to one of their ceilings. *AE*, fig. 19 is a faithful rendering of it. Its width was 0.52, its height to the top of the crowning moulding 0.36.

I also believe Orlandos' system, of nine beams and eight spaces, with the two end beams resting against the *epikranitis*, is correct and fully supported by the block *AE*, fig. 20<sup>71</sup> and the analogy of Rhamnous and the Hephaisteion. The total length to be covered (*AE*, 223) is 11.15; and this gives nine beams of 0.52, eight spaces of 0.82.

The ceiling beams at Sounion are crowned with a *cyma reversa*, not an *ovolo*. This is very unusual.<sup>72</sup>

<sup>71</sup> See above, n. 58.

<sup>72</sup> See Shoe, *Profiles of Greek Mouldings*, 30 and pl. XXVI, 22.

*Side Walls of Cella-Buildings.*

Below the orthostates are a 'secondary wall-base'<sup>72</sup> and a toichobate. The secondary base is unmoulded except for a tiny Ionic moulding occupying its topmost quarter around the *antae*. The toichobate protruded 0.08 above the peristyle floor, the secondary base was 0.313 high and nearly level at the top with the internal floors, and the orthostates were 0.842 high. The secondary wall-base, aligned internally with the toichobate, was 0.97 wide, the orthostate course 0.78. The figures are from *AE*, fig. 2. Before we go higher, we must examine the *antae*.

The east *antae* are certain. Their east faces measure 0.92, their sides 0.90 (*AE*, fig. 15). Over the west *antae* there is much dispute. On the analogy of the Hephaisteion their outer returns should be far shorter than those at the east. Orlandos, in conversation, rightly pointed out the error of all plans such as Dörpfeld's and Stais', which make both pairs equal. Now the cross-thranoi at Sounion were much wider than in the Hephaisteion. There is some evidence<sup>74</sup> that at Rhamnous the west *anta*-return was wider. I accept Gandy's evidence for this, that the *anta*-return on the orthostate course (which Gandy shades in black) was as wide as 1 ft. 4.1 ins., or about 0.41. So I have taken the liberty both at Rhamnous and Sounion of allowing the cross-thranoi to dictate the width of the *anta*-returns; thus making the latter at Sounion about 0.70 wide.<sup>75</sup>

The east *antae* are isodomic. But the marks on their backs show they were appended to pseudo-isodomic flank walls (see *AE*, figs. 1 and 2) of courses alternately 0.30 and 0.60 high. The lower courses were of single flat stones, the higher of pairs of 'orthostates'. The two uppermost of the higher, level with the outer entablature, were each 0.625 high. Following Orlandos, I restore the plinths of the lower courses as 1.26, those of the higher as 1.80 (one and a half units) in length. This gives fifteen of the lower and ten pairs of the higher along each side course from *anta* to *anta*, excluding the *antae* themselves.

Now, while the orthostates, secondary wall-base and toichobate all observe irregular lengths near the east *antae*, where alone they survive, I believe that they too observed the unit as soon as they got into their stride. In *AE*, fig. 2 there is the significant distance 1.26 from the first join of the secondary wall-base to the inner end of the first orthostate. Moreover, the blocks of the secondary wall-base on the north side, reading from the base of the east *anta* westwards, are 1.5 for the *anta*-block and thence 1.45, 1.2 and 1.3. The last

<sup>72</sup> See above, nn. 27, 34.

<sup>74</sup> See below, p. 107.

<sup>75</sup> This would also align the *anta*-returns more

artistically with the change from the isodomic *anta*-blocks to the pseudo-isodomic side walls, as we shall see at once from the probable lengths of the 'plinths'.



two already roughly average 1.26. I have therefore restored a wall whose orthostates and foundations nearly all observe the unit. I believe the anomalous lengths at the east end, like the interval of 0.15 between the joints of orthostates and backers, were specially designed to break joint completely with the plinth-courses. The *epikranitis* I have fully discussed above.

### *Pronaos.*

Depth without colonnade: 3.2; with colonnade: 4.4 (Dörpfeld). The façade had an Ionic frieze, whose sculptures were probably not returned round the inner frieze of the east peristyle. Fragments of the sculptures, it is true, were found by Dörpfeld exclusively in the east peristyle and add up collectively to more than the distance between the side colonnades of the temple. But they add up, as Orlandos observes, to less than the length of both an east and west frieze on the pattern of the Hephaisteion; and Blouet perhaps brought all the sculpture he found to the east peristyle. The jointing is irregular; but most of the surviving sculptured blocks are between 1.10 and 1.35, again roughly observing the unit.<sup>76</sup>

The intervals along the façade, from the outer columns to the *antae* and the two inner columns, are nearly equal. Those between the *antae* and the outer columns are a shade larger than the others, as is seen from Blouet, pl. 35. I make them 2.46 (= 0.58 + 1.42 + 0.46) to the 2.43 (one third of 7.3) of the others. The height of the two inner columns is slightly over 5.7 (Blouet). They are of eight drums below the capital-block. Between the *antae* was a raised 'sill' or threshold, illustrated in *AE*, fig. 15. On the analogy of the Hephaisteion<sup>77</sup> I have inserted another in the *opisthodomos*.

### *Door to cella.*

I consider this together with the east cross-wall. The secondary wall-base shown in *AE*, fig. 11, was 1.225 broad, its two end-blocks 1.38 long. The wall seems to have been set on the east side of the blocks, and the depressions carved out of their east sides were cut for the facing of the door jambs. The door posts, I believe, extended from the inner ends of the surviving blocks to points about 0.39 nearer the side walls of the cella. This gives the door an aperture of 2.64 (= 6.3 minus  $2 \times 1.83$ ) with posts each under one sixth of its width. The reader will notice from *AE*, fig. 11, that the eastern facing of each post was much wider at the bottom, 0.76 wide, in fact. But it was a Greek habit to spread the facing at the bottom. One thinks at once of the Olympian

<sup>76</sup> Two smaller fragments, whose length I measured as 0.67 and 0.77, have neither edge surviving. The curious can see the figures in Fabricius (*AM* 1884, loc. cit.). An epistyle block, now broken but perhaps from

below the south end of the last sculptured frieze, has a dowel hole 1.19 from the base of its mitred end.

<sup>77</sup> See above, n. 35. I have not restored it in my picture of the Hephaisteion.

Heraion and the Treasury of the Athenians at Delphi. Extending upwards to epistyle level, the aperture of our door would have the nearly Vitruvian proportions <sup>78</sup> of 5.72 to 2.64.

The jambs, then, extended on the east slightly outside the cross-wall. They are generally held <sup>79</sup> to have protruded further on the west. The cross-walls, indeed, should have occupied only 0.8 of the width of the secondary base (1.22); and its east face must have approached the other's east face, thus reversing the system of the Hephaisteion.<sup>80</sup> None the less, I doubt whether the western jambs protruded far. I never saw the block *AE*, fig. 14, alleged to show projection, and cannot understand it from the picture. As interpreted on *AE*, fig. 15, it gives a vertical hole in the interior of the marble post, which I dislike. The only other evidence is *AE*, fig. 13, which I agree with Orlandos is part of the lintel of this large door. As <sup>81</sup> a large block at epistyle level, it has the usual holes for claws, and I believe their spacing gives us its scantling. I restore it in FIG. 16, on the analogy of the epistyle backers. Its holes are longer and narrower than those on the backers. It was itself narrower. FIG. 16 gives all lengths and breadths in the same mutual proportions; and a total length results of 3.78, <sup>82</sup> a breadth of 0.42. 3.78 is perhaps a little long, and in my drawing I have made the lintel equal to the opening and the posts. But the width is satisfactory, about half that of the cross-wall and eastward projections (0.76 + 0.10). I have given the door no westward projection.<sup>83</sup>

### *Cella.*

Length: 10.6 (Dörpfeld). I have no evidence for the marble courses of the west cross-wall, of which my reconstruction is fanciful. This *cella*, unlike its poros predecessor, had probably no internal colonnades. Dinsmoor, describing it in note 322 to his *Hephaisteion*, observes: 'The foundations are merely for two rows of columns without the ambulatory return which would undoubtedly have been employed if such columns had been used in the later temple.' Parallel colonnades without the return are apparently commonest in archaic and early classical buildings, such as the temples of Aphaia and of Zeus at Olympia.<sup>84</sup> My dotted lines show the inner edges of the existing foundations.

A patient reader will infer I have found Sounion badly preserved—less well,

<sup>78</sup> See above, p. 77. I have scouted these proportions at the Hephaisteion. But Sounion as a whole is proportionately loftier.

<sup>79</sup> E.g. by Dinsmoor, 54, n. 120: 'At Sounion, for instance, where these inward protruding jambs were planned, apparently projecting 0.285 m. inside the walls' (Apex, *Ep.*, 1917, pp. 220-222), the sill-course is of exceptional width, 1.225 m. instead of 0.864-0.867 m. as in the Hephaisteion'.

<sup>80</sup> See above, p. 77 and n. 40.

<sup>81</sup> It would, I suppose, be possible to give to a door 1.210 thick three lintel blocks of this width, and such a door could perhaps have rested on a sill-course 1.225 in width (cf. n. 79 above). But I consider these figures a little close for an elegant building.

<sup>82</sup> At the same time they are found in much later Ionic, such as Hermogenes' temples (Robertson, <sup>3</sup> fig. 67).

in many ways, than either of the other temples. If I present the evidence correctly, we still need to know more of (1) the west foundations, (2) the spacing of the tiles and antefixes, (3) the *epikranitis* course, (4) the support of the purlins and (5) the *cella* door. Systematic study and clearance could perhaps settle all these questions. Orlandos has done much, even under the existing handicaps. It should also be possible to obtain a definite measurement of the intercolumniations.

The orientation has a bearing on astronomical theories of orientation. For motives of economy it follows that of the archaic temple. The dedication to Poseidon I have taken for granted. Of the cult statue we know nothing. By contrast, this forms the most celebrated relic of our third temple.

### PART III

#### THE TEMPLE OF NEMESIS AT RHAMNOUS

(PLATE 9)

This was first systematically published by J. P. Gandy in *The Unedited Antiquities of Attica* (Society of Dilettanti, 1817), 41 ff. Unhappily the author gave no drawing of the site in his time or of the important blocks as he found them; and much was lost between 1817 and 1923, when Orlandos at last drew and measured the temple in its present state.<sup>83</sup>

Of later publications I have used the following:

Frazer, *Pausanias's Description of Greece*, Vol. II, 451 ff.

Lethaby, *Greek Buildings*, which occasionally illuminates features of Rhamnous, notably 148 ff. and 176 ff.

Orlandos, 'Note sur le sanctuaire de Nemesis', *BCH* 1924, 305-20 and pls. IX-X.

Robertson, *Greek and Roman Architecture*<sup>2</sup>, 328.

Zschietzschmann, in *AA* 1929, 441 ff., confines his attention to the adjacent smaller temple; but Miss L. T. Shoe, in her *Profiles of Greek Mouldings* (1936), pl. LXXVII gives accurate drawings of the order of our temple and a section

<sup>83</sup> Of intermediate plans or views, the photograph of Rhamnous *BSA* I, pl. III, is of small use for my purposes. Frazer's plan (*Pausanias's Description of Greece*, II, 452—repeated in Frazer and Van Buren, *Maps and Plans to Illustrate Pausanias*, pl. XXII) is a mere repeat of Gandy's. One greatly regrets Gandy's failure to draw the site; for he tells us that in his time the steps were entire all round and the positions of the prostrate columns perfectly discernible. To-day less than one quarter of the stylobate survives, heavily incised by

modern vandals. Gandy, moreover, found portions of 'every part of the superstructure' lying amongst the ruins, permitting a complete restoration of ceiling and roof. Gandy himself, as we shall see, took some fragments without recording the fact, and one metope, at least, seems to have found its way to Rome. Langlotz, in *Scritti Nagara*, 228, observes it could have come there 'auf ähnliche Weise . . . wie die Fragmente vom Parthenon', certainly on the building in Carrey's time, but now in the Vatican.

through the south peristyle and part of the *pronaos*. I have drawn freely, except in a very few cases, on her measurements. With Gandy and Orlandos, she has helped me most.

Of the details, a ridge tile with palmette and acanthus, now in the German School at Athens, was published by M. Meurer, 'Das griechische Akanthusornamente', *JdI* 1896, 117 ff; and a metope by Langlotz, *Scritti in onore di Bartolommeo Nogara* (1937), 225-30 and pl. XXI.<sup>84</sup>

#### *Materials and Technique.*

Rhamnous is fairly near Mt. Pentelikon, and our temple was built of Pentelic marble. A duller though fine-grained local marble was used for the adjacent small temple and apparently, as we saw above (p. 69), for the *euthynteria* and lowest step of our building. Clamps are used as rarely as possible, at least in all courses below the orthostates, as Orlandos has already remarked.<sup>85</sup> To ensure firmness without them, the joints, rectangular enough in the visible parts, run off behind at odd angles, and the whole foundation has the appearance of polygonal masonry. It is not always easy to distinguish even on the visible parts between original joints and later cracks. Furthermore, the unit in this temple is small and the builders could economise in metal clamps by using blocks of double length. I have shown cases in the stylobate, frieze and frieze backers, all well attested. For the very lowest courses, as my picture shows, very large blocks were generally preferred, all of various lengths, presumably for economy.<sup>86</sup> The clamps were of the usual H form, except in the orthostate course, where double-dovetails were employed.<sup>87</sup>

For all the economy practised, the temple was yet never finished. Everything points, in fact, to a time of trouble and poverty for its erection. But its condition makes it very interesting to the student of ancient construction. I shall notice the most striking signs of incompleteness as they occur.

#### *General Dimensions.*

Length and breadth on *euthynteria*: 22.76 × 11.58.

Length and breadth on stylobate: 21.30 × 10.10 (Robertson).

Length and breadth on *corona* of *geison*: 21.60 × 10.40. (See below, p. 102.)

<sup>84</sup> Brought to my notice by Prof. Möbius.

<sup>85</sup> *Loc. cit.*, 312. Clamps, as his plan shows (pls. IX-X), were used on the middle step at the corners only. Moreover, I saw another in a similar position on the lowest step. It fastened the N.E. corner block to its neighbour to the south. It measured 0.32 × 0.08, and its axis was set 0.45 behind the face of the step. This reinforcement of the corners is an interesting sign of Greek logic and carefulness, and is repeated (*cf.* Orlandos, *ibid.*) at the corners of the secondary wall-

base.

<sup>86</sup> Penrose observes, in his *Athenian Architecture*, when referring to the epistyle blocks of the Parthenon, that if all the stones 'had been reduced to the length of an exact columniation, it would have been almost impossible to obtain a sufficient supply for the architraves'. I believe that at Rhamnous also it was better to use the stones as they came.

<sup>87</sup> Orlandos, 311 and fig. 4.

Height, from bottom of lowest step to apex of raking cornice: 7.6 (= 0.9 + 4.1 + 1.38 + 1.23, the heights of steps, columns, entablature and pediment).

Length of *cella* buildings on the toichobate: 14.9 (ca. 15.00 Robertson<sup>88</sup>).

Width on the toichobate: 6.50 (= 4.95 + ca. 1.50, or the width of the *pronaos* and the thickness of its side walls; for which see below, pp. 107-8). Robertson also gives 'ca. 6.5'.

The unit. 0.94/0.945. 0.945 was measured by Shoe as the unit on the frieze. I believe this figure was intended as three quarters of that for Sounion (1.26). While the Hephaisteion nearly observed the regular Attic foot of 0.328,<sup>89</sup> Sounion and Rhamnous were apparently based on another slightly smaller foot, now forgotten.

The plan is remarkable, seeing that the east *antae* are strictly aligned both with the second and fifth columns of the façade and the third columns of the long sides. This seems otherwise unknown in fifth century Doric, as Gandy observes.<sup>90</sup> The Hephaisteion makes no attempt to relate *antae* and outer colonnades; the temple of Poseidon aims at equal intervals across the front of the *pronaos*; but our temple aligns its *antae* on its outer columns. This last method, I believe, is Ionic, borrowed from the great axially-planned temples of Ephesus and Samos.<sup>91</sup> The twelve columns at the sides are also a great rarity in the fifth century. The architect of our three temples, if one architect they had, was a man of some versatility.

### *Euthynteria.*

Height: 0.14, of which the uppermost 0.04 is polished and the rest is stippled on the pattern of Sounion.<sup>92</sup> Horizontal projection: 0.07.

I could not measure the individual blocks on the surviving south flank, owing to scrub and lack of time. On the east, from north to south, I measured them as 0.86, 1.13, 2.06, 1.03, 2.64, 1.50, 1.32 and 0.98, totalling 11.52 (0.06 too short). They observe, then, no proportion.

<sup>88</sup> I followed Robertson's figure of 15.00 seeing that ca. 6.5 proved so accurate. Orlandos' plan is not meant to be accurate for differences below 0.1. I have since found, on calculating from Gandy the lengths and number of orthostates, that I overshot the mark by about 0.1. This has not affected the dimensions of *pronaos* and *cella*, but has made the *opisthodomos* 0.1 too long.

<sup>89</sup> Robertson<sup>8</sup>, 82, n. 3, gives this figure for the canonical Attic foot. It is a little large for the Hephaisteion, with its unit of 1.30 or four Attic feet. The figure given by Tilton for the Argive Heraion,

which also observed the Attic foot, would agree more closely. The unit of the Heraion was apparently 1.633, or five Attic feet of 0.326. See Tilton *op. cit.*, 120.

<sup>90</sup> *Op. cit.*, 44.

<sup>91</sup> Robertson, figs. 39 and 43. The logical perfection of this Ionic plan is reached, in my opinion, with Hermogenes (Robertson, fig. 67), too frequently belittled as an architect. Lethaby's attack on him (*Greek Buildings*, 194) is unworthy of Lethaby.

<sup>92</sup> See above, p. 81. This course, like the steps of Sounion, shows polished surfaces about the joints.

*Lowest Step.*

I made this 0.295 high, 0.335 broad. It is divided vertically into three bands, the uppermost smooth and 0.07 high, the middle projecting, rough and 0.13 high, and the bottom smooth again and about 0.13 high. The rough band shows no polish near the joints, and there is no trough along the inner part of the tread. This unfinished work in no way resembles the decorated steps of Sounion or Bassae.

I rapidly measured the blocks on the preserved east side, and obtained for them, from north to south, lengths of 1.15, 1.00, 1.39, 2.42, 0.92, 0.82, 2.20 and 1.40, totalling 11.3 (0.1 too short).

I wish I had measured every block on the south side. On the few lengths I obtained, my record differs greatly from Orlandos' plan: *viz.* from the west corner eastwards 0.86, 2.80, 2.64 and 1.89, of which only the first agrees with Orlandos. As it is, I have had to follow his record for the whole course. This is no trivial matter, involving as it does some of the largest stones in the temple.

*Middle Step.*

This is slightly larger, about 0.32 high and 0.34 wide (so also Gandy, pl. 5), but its blocks are much smaller. Most of them average a unit in length, though some are of double length. But their approximation is still rough. The builders were still affected by the lengths of blocks as they broke from the quarry face.<sup>93</sup> One admires the slow transition to the greater accuracy of the stylobate. The face of the middle step has again the rough projecting band.

*Stylobate.*

The height was again 0.32, and the depth of the blocks 0.865 (Shoe). We can determine the size of the vanished corner blocks, and one of their neighbours survives. The centre of the shaft in this temple normally stood above a joint in the stylobate, not, as in the other two, above the centre of a block. This system continues on the south side to the fourth column from the west. Thence one has a double block 1.90 long, a block of 1.33 and another of 1.26 (or one and a third units).<sup>94</sup> This seems to have left about 1.45 for the corner block. The distances total 5.91. The theoretical distance from the axis of the fourth column to the west stylobate face is 5.95 (= 10.65, half the length of the stylobate, minus  $5 \times 0.94$  or 4.7). On the façades, the corner blocks were 0.95 long (from marks on the middle step). As soon as possible, with the second column, the placing of columns over joints was resumed. The next

<sup>93</sup> See above, III. 93, note 86.

<sup>94</sup> This is the first place where I found Gandy seemingly

unreliable. On pl. 11 he puts the second column over a joint on the long side of the temple.

block was thus half 2.5 (10.10 minus  $8 \times 0.945$ ) and thus 1.285. We note that the corners were not roughly square as at Sounion and the Hephaisteion.

There was again the rough projecting band halfway up the face; and along the upper corner of the face was a continuous raised rim, a 'protective surface' of curiously intricate form, measured by Gandy.<sup>86</sup> It was all destined to be chiselled off and should be compared with the simpler rim, likewise unfinished, of the Propylaea's east stylobate. On the upper surface between the columns are raised rectangles of roughly carved stone, extending to the inner but not the outer edge. They have not vertical but slanting edges, except along the inner edge. They are only about 0.025 high and are usually about 0.94 (one unit) by 0.74. They are bisected by the joints of the blocks. When dressing began at the quarry face, presumably half the surface of each block was first left rough.<sup>86</sup> I have polished away these rough rectangles around the east peristyle, because it was much the most frequented side.

#### Columns.

Height: about 4.1 (Gandy: whom I accept, despite difficulties,<sup>87</sup> as he is the last authority to study the columns. He gives the height on pl. II as 13 ft. 5.45 in.).

Lower diameter: 0.71 (Shoe). The column face is set about 0.5 from the outer, 0.10 from the inner edge of the stylobate.

Upper diameter: 0.54 (Shoe). I have taken these measurements where the shafts are fluted—only for a few centimetres at their upper and lower ends.

Sides of *abacus*: 0.75 long (Shoe).

Height of *abacus*: 0.14 (Shoe).

Gandy on pl. V assigns five drums to each shaft below the capital block. Of these, he makes the bottom drum higher than the rest, the others all equal. He divides every shaft uniformly. This is to iron out the evidence. My illustration shows the diversity of the bottom drums. Those still standing on the south side, from the fourth to the seventh from the west, are respectively 0.80, 0.925, 0.885, and 0.62 high. These seem to be the original heights. In my drawing I have not dared to mark in any other drums. There may have been five on an average. Of course my drawing does not imply the columns were monolithic.

<sup>86</sup> Pl. 5.

<sup>87</sup> There are, however, difficulties. For the blocks are not always exactly 0.945, and one block still *in situ*

has a roughening 0.54 instead of 0.47 long.

<sup>88</sup> E.g. his simplification of the drums, which I shall mention at once.

*Spacing of Columns.*

From axis to axis this was clearly 1.88/9. The space left vacant was thus 1.88 minus 0.71, or 1.17, which exceeded the lower diameter by 0.46. This is very nearly Dinsmoor's figure of 0.475.<sup>98</sup>

It follows from 'Dinsmoor's Law for the Excess'<sup>99</sup> that Rhamnous is the lightest of the three temples; for the excess is a constant 0.50 and the shafts are much smaller. The temple perhaps looked pleasanter with thicker, unfluted columns than it would with properly thinned and fluted shafts.

*Angle Contraction.*

From the centre of the second column to the corner of the stylobate was about 2.17. The last axial intercolumniation was thus 2.17 minus (0.35 + 0.05), or 1.77, and the angle contraction about 0.11.

*Epistyle.*

Height: 0.585 (Shoe).

Width of soffit, including backers: 0.66 (Shoe).

Only in the Hephaisteion, then, is the soffit equal to the lower diameter. By this test it should be a later temple,<sup>100</sup> but I believe there was a special reason for the dimension of Rhamnous, which I shall discuss almost at once.

There was here no Ionic moulding around the east peristyle in place of the usual *taenia*.<sup>101</sup> Both epistyle-blocks and backers had pairs of claw-marks in their upper surface, as shown in Orlandos, fig. 6. Each pair was 0.65 long (= 0.15 + 0.35 + 0.15), though only 0.07 wide. I presume, then, that there was only one pair in the middle of each stone. But I never verified Orlandos. I have restored the jointing at the corners as in the Hephaisteion.<sup>101</sup>

*Frieze.*

Height: 0.575 (Shoe).

Width of triglyphs: 0.37 (Shoe).

Width of metopes: 0.575 (Shoe).

Here for the first time we have perfect squares as metopes. This width, of course, is made possible by the relatively wider spacing of the columns. It is none the less a good instance of the simple, closely-knit proportions in which this temple excels.

The metope faces for the most part were included in the frieze blocks, but were separate on the east façade. Langlotz (*Scritti in onore di Bartolommeo*

<sup>98</sup> *Hesperia* IX, 22.

<sup>99</sup> See above, pp. 71 and 82.

<sup>100</sup> See above, p. 71 and below, p. 111.

<sup>101</sup> See above, p. 72 and 83.



*Negara* (1937), 225-230) has lately identified a carved metope in the Villa Albani as from this façade. Its size (it is 0.574 square) and style,<sup>102</sup> no less than its subject, identified by Langlotz as two Niobids, equally fit our temple. Langlotz envisages a complete scene of ten metopes covering the east façade and representing the fate of Niobe. On the three other sides each block as a rule would contain one triglyph and one metope, as at Sounion. So also, I believe, the corner blocks. But here trouble starts. Two centre-blocks survive on the site, each with one triglyph between two metopes. But we know, since Langlotz's discovery, that neither could come from the east façade. As they

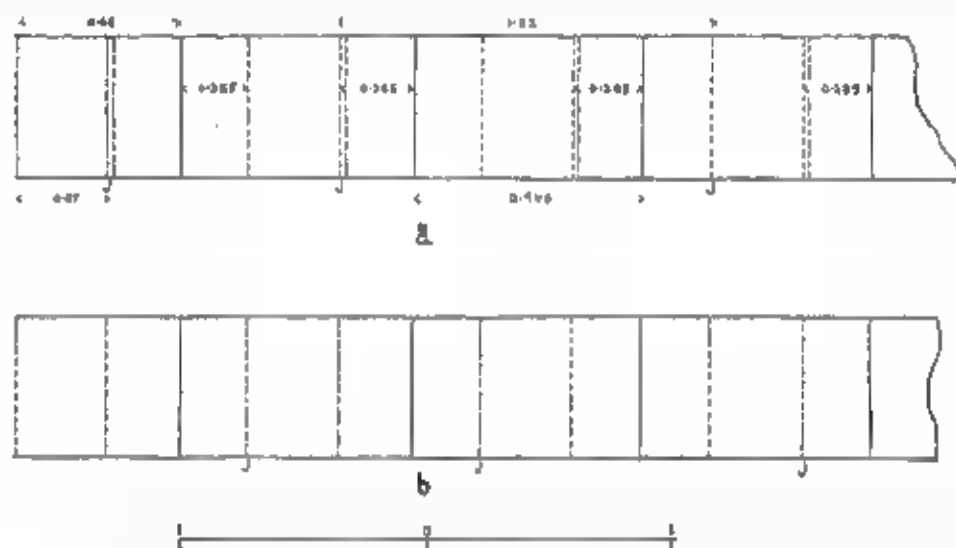


FIG. 4.—(a) DIAGRAM OF FLANK FRIEZE AND BACKERS, RHAMNOUS (ELEVATION).  
(b) DIAGRAM OF FRONT FRIEZE AND BACKERS, RHAMNOUS (ELEVATION).

are a pair, they are from the long sides. From FIG. 4, where 'a' represents part of a long side and 'b' of a façade, and where in 'a' the double dotted lines mark the joints of the frieze blocks, and the single the limits of triglyphs and metopes, one sees that a joint should have existed on the long sides between the corner triglyph and the first metope. Strange as this may seem—for the first joint will be almost over in the epistyle—I believe it follows from the evidence.<sup>103</sup>

One finds among the frieze blocks some of double length.<sup>104</sup> This is true

<sup>102</sup> Langlotz would place it, stylistically, late in the fifth century, but before its last decade. To my eyes it recalls in its manner the 'summer-stricken' art of the Bassae frieze.

<sup>103</sup> In both 'a' and 'b' of FIG. 4 I have placed the 'centre-block' and change of joint very near one

corner, at the left hand side. I do not know, of course, where it was, though I suspect from surviving blocks that it was near the left hand ('dexter') corner of each long side.

<sup>104</sup> See above, p. 95.

also of the backers; and it was from a backer as long as a frieze block of two triglyphs and two metopes that I found the backers must have some simple relation to the frieze blocks—either equal to them (as in the Hephaisteion) or twice them. I found, moreover, that the thickness of frieze and backers (0.66 at the triglyph) equalled one triglyph plus one half-metope.<sup>105</sup> I believe this was intentional. Assuming that the visible faces of all frieze backers were equal and one unit long, I found they must go without remainder into the visible length of frieze in both the end and flanking peristyles (ignoring, of course, the part obscured by the cross-frieze near the east end). FIG. 4, *a* and *b*, where the continuous vertical lines represent the joints of the backers, show why this must be so.

I know this is a matter for careful search of the epistyle backers for any dowel-holes they may contain. While I record none myself, I must infer that Gandy's seeming record is wrong. On plate 10 he marks the epistyle blocks and backers with what seem either dowel-holes or claw-holes. But they bear no resemblance to the claw-holes of Orlandos. They are single and small. As clearly they cannot be dowel-holes. For (1) those on the backers are exactly behind those on the front blocks, as if joints were kept between blocks and backers: which Mr. Hill tells me would be unheard of; (2) all are placed at points just outside the edges of the *abaci* and corresponding to no conceivable joints in the frieze blocks. But dowel-holes, of course, should be nearly in line with these joints. I can only conclude Gandy pl. 10 has here no relation to reality.

I found no evidence for the west cross-frieze inside the east peristyle.

#### *Geison.*

Height to *corona*: 0.22 (Shoe).

Projection of *corona*: 0.39 (Shoe).

Thickness of *geison*: 1.09 (Shoe).

The upper surface of the side *geisa*, remarkably, was flat from the *corona* inwards (Gandy and Shoe). Each block at the back contained a portion of *epikranitis*, whose height was 0.18, and whose upper shelf for ceiling beams was 0.18 deep.<sup>106</sup> The average block was one unit long. The corner blocks were square on plan, on a side of 1.23, to the end of the second mutule from the corner ( $= 0.1 + 0.39 + 2 \times 0.37$ ). Hence joint is always broken with

<sup>105</sup> Orlandos first pointed out (312-13 and fig. 5) that the front of the triglyph, as usual, was in the plane of the front of the epistyle, not behind it, as Gandy wrongly supposed.

<sup>106</sup> Here, however, arises a difficulty I have only recently observed. On Gandy pl. 5 and on my drawing, which follows it, the *geison* blocks, ceiling beams and coffers leave no space for the lower ends of the

rafters. We may notice that Gandy has covered the side peristyles, as I have done, with the lowest ceiling beams available (0.208 in height; see below, p. 104), but even these give him no help here. Yet the rafters must have continued as far as the *geison* blocks, whose surface is designed to receive them in the customary manner. At present I can offer no solution of the problem.

the frieze course below. I saw one of these blocks on the site, and quickly measured it as 1.2 square. This agrees with Gandy on the whole.<sup>107</sup> The two central blocks on each side were 1.23 long, with three *viae* and two and a half mutules (= 0.3 + 0.74 + 0.185). It is interesting to find the lengths of corner and centre-blocks equal.

According to Gandy (plate 7 and p. 46) the *geisa* of the façades were higher than the side *geisa*, possessing as they did a low 'pedimental step' above the *corona*.

#### *Pediment.*

I myself saw on the site one tympanum block. It was originally next to the corner slab of the tympanum. It was 0.82 high at its higher end, 0.46 at the smaller. It gave the angle of slope of the pediment as  $13\frac{1}{2}^\circ$ . This in turn gives our slab a length of about 1.75 and a total height to the pediment (including the raking-cornice) of 1.23. There were clearly five inner slabs to the tympanum, each about 1.8 in length, but probably not regularly observing the unit.<sup>108</sup> Each was 0.25 thick, and set back with its front 0.39 from the *corona* of the *geison*. From the corner of the tympanum to the corner of the *geison* was about 0.70; so that the whole pediment was about 10.4 wide. The jointing at the corners was complicated (Orlandos, fig. 8), and I may have misunderstood some of its details.<sup>109</sup> The raking-cornice was nearly 0.2 high, being four fifths of the horizontal *geison* (Gandy; cf. Orlandos, fig. 8). It is divided by Gandy into blocks each, where possible, one unit long. But I did not confirm this.

#### *Akroteria.*

I have copied the pictures of Gandy, which are circumstantial, especially plates 4, 5 and 10. He makes the bases at the corners 1 ft 8.55 ins. on the façades by 2 ft. 4.3 ins. on the long sides. The *akroterion* at the apex had a base ■ ft. 4.25 ins. long on the façade. Of the corner *akroteria* Gandy writes (*op. cit.*, 45): 'The chimaerae on the akroteria, at the points of the pediment, were found in front of the temple.' He published no evidence of them in their present state; nor did he include them in his gift to the nation of five marbles from Rhamnous.<sup>110</sup> Lethaby (*op. cit.*, 92) supposes the creatures were in fact sphinxes.

<sup>107</sup> On pla. 2 and 11 Gandy makes his corner blocks square, on a side of my length. But on pl. 10 they are oblong.

<sup>108</sup> Gandy places all the joints exactly over the centres of the columns. But in this temple the care of execution is not quite equal to the logic of the design. Moreover, the lower corners of the tympanum, as we see in the following note, have no direct relation to the columns, while its last 0.2 on either side may have formed part of the corner *geison* block.

<sup>109</sup> I may have misread my notes on the corner block of the *geison*; but I understand them to say that the upper slope of the tympanum dies into the upper surface of the *geison* 0.58 from the corner of the pediment, and that its last 0.2 metres form part of the corner block. This would give the whole a width of  $5 \times 1.8$  plus  $2 \times 0.58 + 2 \times 0.2$ , or 10.56—too wide a pediment.

<sup>110</sup> In 1820. I am indebted to Mr. Ashmole, who showed me the record.

*The Roof.*

I found no traces of ridge beam and purlins. For the tiles I have followed Gandy, who shows details on plate 12 and the complete roof of half the temple on plate 10. There were nine rows of pantiles on either side of the ridge pole, and continuous *simae* on the two flanks, each length of which was one unit and formed part of one block together with a pair of the lowest row of pantiles and the butt-end of each alternate row of cover-tiles.<sup>111</sup> The profile of the *sima* was low and bulging (Shoe, pl. XIX, 6) of the sort often wrongly restored on the Hephaistion (see p. 74 above), and not of the usual Periclean Attic form. The ridge tiles rising at the intersection of the cover-tiles on the ridge pole are accurately rendered by Gandy on plate 12. They are to be compared with those at Bassae.<sup>112</sup> Professor Möbius informs me of a preserved example from Rhamnous in the German Institute at Athens. This is doubtless the tile figured in Meurer (*JdI* 1896, 117 ff.). The prominence and formalization of the acanthus would perhaps show it is late in the Periclean Age.<sup>113</sup>

*Flooring of Peristyles.*

We have definite evidence for the side peristyle. Its floor was 0.875 wide (Shoe) and formed of single blocks, each about 1.25 long (one and a third units). My measurements agreed with Orlandos, pls. IX-X (Gandy, strangely, while showing the floor of *pronaos* and *cella*, ignores that of the peristyle—another instance of his imperfections). It was continued to the east stylobate, but not, I think, to the west. It will have stopped short exactly at the west face of the west *anta*, giving exactly fourteen slabs to a length of nine columns and nearly ten intercolumniations.

In the east peristyle between the prolongations of the two side floors were three rows of five slabs, each 1.3 by nearly 1.0. The east peristyle floor was nearly 3.0 deep.

The floor of the west peristyle I have divided into two rows of seven, each 1.2 by 0.8. I have thus obtained the most nearly uniform flooring possible.

*Ceiling of Peristyles.*

Here, as for Sounion, one must break off in order to consider the respective levels of the *epikranitis* courses. I follow Shoe and Dinsmoor for these, but had better remind the reader of their arguments.

As in most temples, one can distinguish the *epikranitis* from the course

<sup>111</sup> Gandy pl. 12.

<sup>112</sup> Cockerell, *Aegina and Bassae*, Part II, pl. VII.

<sup>113</sup> See Meurer, *JdI* 1896, 132, fig. 20. Typologically, though not so primitive and uncoordinated as an example from Epidaurus, it shows the acanthus leaf less organically placed than in an example from the Argive

Heraion (Meurer, fig. 23). But I feel this is a matter of taste rather than date. (At Bassae there is no acanthus on the ridge tiles, but a very low acanthus calyx on the antefixes—Cockerell, pl. VII.) The tile itself was picked up by Herr Schiff under the ruins of Rhamnous on Dörpfeld's voyage of 1895.

above it, containing the ceiling beams, by its use of the hawksbeak moulding. But this at Rhamnous assumes a curiously archaic form, not yet explained.<sup>114</sup> The fragments of *epikranitis* are of two heights, and the archaism is especially noticeable on the higher. The higher, we know from the fragment with an internal corner seen by Shoe,<sup>115</sup> will have covered two walls at right angles on the inside of a chamber. It was probably from the *cella* and probably 0.21 high originally, or equal to the ceiling beams of the peristyle as measured to the top of their crowning moulding. The surviving ceiling beams are of two different heights, 0.248 and 0.208, though of one width, 0.36 (cf. Shoe; Orlandos, fig. 9). With Shoe I suppose the taller stood on the taller *epikranitis*. If the *cella's* ceiling, as usual, were of wood, we can conclude that *pronaos* and *opisthodomos*, with their tall marble ceilings, had the tall *epikranitis* of the *cella*. I have given all three chambers the same height.<sup>116</sup>

The ceiling beams and coffers largely survived in Gandy's day.<sup>117</sup> He wrongly marked them all as of one height, but for the interaxial spacing he seems reliable. This observes the unit where possible, but exceeds it a little (as it must) on the end peristyles. The east peristyle has a span from north to south of 8.5. Divided, as Gandy divided it, into eight spaces and nine beams 0.325 in width on the soffit, it gives an interaxial space of 0.98. On the flank peristyles, between the east cross-frieze and west cross-*thranos*, there are fifteen spaces and fourteen beams over which the unit was exactly observed (Gandy, pl. 8). Each bay accommodated eight coffers, arranged in two rows, the span of the side peristyles being 1.05 (Shoe). It is remarkable to find ceiling beams observing the unit, and another instance of the closely-knit design of our temple.

#### *Side Walls of Cella-Buildings.*

These dispense altogether with mouldings on the secondary wall-base (cf. Orlandos, fig. 4), and with broadening below the *antae*. Like the frieze facing the east peristyle, these features gave the building a more Doric character.

Another interesting feature was the provision made for the varying heights of the floors. That of the *pronaos* reached to the top of the secondary wall-

<sup>114</sup> Shoe, 126 and pl. LX 12. The point of greatest projection is at the top.

<sup>115</sup> Shoe, 6 and 126.

<sup>116</sup> Orlandos was the first to assign the higher moulding, correctly, to an *epikranitis* and not, as Gandy had done, to the upper part of the frieze backers (Orlandos, fig. 1 and p. 315) just beneath the known *epikranitis* of the peristyles. At first sight the only other possible place for the larger moulding is the east peristyle, a part of the building specially treated by our architect. But the inner *taenia* of its epistyle corres-

ponded to that in the other peristyles, as Orlandos shows (314), on all sides except its west side, which was the façade of the *pronaos*. One presumes that the *epikranitis* followed suit. But we know from the surviving internal mitre joint (Shoe, text, 126) that the heavier moulding covered at least two adjacent sides and must therefore have covered all four of the chamber where it was placed. None the less, I would welcome a clearance of the site of the sort I could not make myself last year.

<sup>117</sup> See above, n. 83, and, for a difficulty, n. 106.

base,<sup>118</sup> that of the *cella* considerably above this. Half the former and one block of the latter floor survive *in situ*. There can be no doubt for the *cella*. The marble slab has not been moved, and was originally, as we shall see, the second block from the north in the third row from the east. Its upper surface is at least 0.2 above that of the secondary wall-base; and one would have inferred as much from the conglomerate packing of the floor, which still survives. We have, then, three levels of floor, as in the Hephaisteion, but far more pronounced. It is unusual for so much of the orthostate-course to be concealed.<sup>119</sup>

There are no dowel-holes to mark the orthostates, because of the economy mentioned above, and they rested on a roughened and slightly sunken surface. To judge from the markings on this surface, which covers about 0.6 out of the course's 0.7, the orthostates equalled their backers in the *pronaos* but exceeded them in the *cella*, where they were apparently 0.32 wide to the 0.27 of the backers.<sup>120</sup> A fragment 0.27 wide survives, now standing in the south peristyle, but it was easier in the time available to examine the marks on the secondary wall-base than to discover possible orthostates.

I have not known in my drawing whether to follow Gandy, pl. 11, who gives the fronts of the outer orthostates a slightly undercut face for the lowest fifth of their height, or Shoe and Orlandos, who both omit it. There is the evidence of Cockerell, *Bassae*, pl. V, for its existence at Bassae. In fact my drawing has probably over-simplified the outer face of orthostates, secondary base and toichobate. I would plead for a more expert examination of the site, all the more necessary if, as I believe, the *cella* walls had internally a continuous moulded base.

On plate 13 Gandy figures several carved mouldings found in the *cella*. He is doubtful whether they decorated the door, which I think projected into the *cella*,<sup>121</sup> or the room as a whole. He never shows the actual blocks, only tidy sections and elevations of the moulding; and, like the 'chimaerae',<sup>122</sup> these stones have long since vanished. I would like to point out that the mouldings included a band of Lesbian leaf about 1.6 ins. high and a triple guilloche 2.2 ins. high. A base moulding totalling about 6 ins. or just over 0.15 in

<sup>118</sup> Architects are so much at variance here that I wish I had considered this feature more carefully. But I find on my return that my notes agree with Gandy (especially plate 3); Shoe gives the *pronaos* a floor level with the peristyle's, and the toichobate a wide, visible projection on both sides. But the toichobate was of fairly rough stones (cf. Orlandos, pls. IX-X) and barely meant to be seen even externally. In my illustration it is altogether invisible. Internally, in the *pronaos*, it was entirely covered by the floor slabs and secondary wall-base, which is about 0.7 wide.

<sup>119</sup> The only parallel that comes to my mind is the

Treasury of the Athenians at Delphi, where the orthostates inside the building are disguised.

<sup>120</sup> For the *pronaos*, Shoe makes orthostates and backers together about 0.55. I believe with Orlandos, fig. 4, and Gandy that they were equal for the *pronaos*, though I hold they were unequal for the *cella*. Shoe sets her wall symmetrically on the wall-base. But Gandy, pls. I and III, shows this had an infinitesimal projection in the *pronaos* and none at all in the *cella*.

<sup>121</sup> See below, p. 108.

<sup>122</sup> See above, p. 102.

all<sup>123</sup> would suit the scale of this small *cella*; and we find just such a combination of guilloche and Lesbian leaf as a base moulding on the early fourth century *cella* of Athena Alea.<sup>124</sup> Believing Rhamnous a possible prototype of Athena Alea, I have applied the ornament to the orthostate backers and grooved the floor blocks (by an architecturally possible, though perhaps questionable technique) below its projection, to obtain as wide a wall as possible. The guilloche is frequently found as a base moulding and I believe less frequently on doors. The Erechtheum provides as good an example as any. I hope my restoration will at least provoke discussion.



FIG. 5.—(a) AND (a') SECTIONS OF MOULDING, RHAMNOUS (FROM GANDY).  
(b) SECTION THROUGH BASE MOULDING, ATHENA ALEA (FROM CLEMMENSEN).

The *antae* were equally remarkable. Their faces on alternate plinth courses were divided by vertical joints. As at Sounion, the alternate plinth courses consisted of 'orthostates', here allowed to show on the *anta* face. Rhamnous seems further than any building of its age from those early temples

<sup>123</sup> With all Gandy's subsidiary mouldings, the base would total 10 ins. or 0.26 in height. But I would like to believe, on the analogy of Tegea, that the guilloche was the lowest moulding of all.

<sup>124</sup> Published by Dugas and Clemmensen, *Aléa Athéna* (Paris, 1924). Pl. XXII gives the elevation of the *cella*, pl. LXIV details of the base-moulding, pl. XCIII the photograph of a fragment. Though the temple is much larger than Rhamnous, the moulding is hardly larger, which disposes of objections that I am

giving my *cella* a finicky base-moulding. At Tegea the *cella* is roughly 20 x 8 and the moulding only 0.205 in height. At Rhamnous the moulding would be 0.16 to a *cella* of about 7 x 5. At the same time, the profiles of the mouldings differ considerably—at Tegea the Lesbian leaf is 0.9, the guilloche only 0.7 high. The reader can decide for himself from my FIG. 5, where *a* and *a'* (to be combined) are a quick tracing of Gandy, *b* a tracing of Clemmensen.

where orthostates and backers provided firm stone sockets for walls of sun-dried brick, and where 'the ends of the side walls of the porches were faced with wood, for the protection of their upper parts, which were of sun-dried brick' (Robertson<sup>2</sup>, 23). According to Gandy, who has alone considered them, the wall courses were isodomic. His restoration conveniently gives five wall courses, each 0.575 high and so of approximately square cross-section, from the top of the orthostates proper (themselves 0.81: Gandy) to the top of the *antae*, and two more, each of 0.575, to the outer *epikranitis*. It would, indeed, be rational to expect the 'orthostates' in the plinth courses to be higher than the alternate courses, as at Sounion. But this, it seems, was not so.

The width of the west *anta*-returns I have taken from Gandy, pl. I.<sup>125</sup> Evidence has disappeared to-day, but in Gandy's time the inner half of the south-west *anta* still partly stood, and there was apparently tooling on the wall base to show the line of the other half. Gandy marks its south face as 1 ft. 4.1 ins. long, or 0.41. I have accepted this, although in some things his pl. I is not to be trusted. For instance, it changes over the single column of the *pronaos* that partly survives.

The lengths of blocks in the secondary wall-base are quite irregular. On Orlandos' plan I measure them from west to east as about 0.82, 1.53, 2.04, 1.33, 1.13, 1.02, 1.23, 1.23, 1.12, 1.13, 1.59 and 0.82. These figures are only approximate.

The orthostates, if Gandy, pl. I, is to be trusted, were probably more regular. From west to east along his south wall one notices 2.30 as partly missing, 6.40 as extant, and 6.30-6.40 (including the south-east *anta*) as missing. But the east *anta* block (Orlandos, fig. 4) was 1.56 long. So the last missing stretch of orthostate was 4.74 long. Now 4.74 is five times the unit and 6.4 nearly seven times 0.92. Assuming, however, that the west *anta* block equalled the east, one obtains only 0.75 (= 2.30 minus 1.55) for the westernmost orthostate.<sup>126</sup> This is not very satisfactory.

On the plinth courses I obtain alternately thirteen and fourteen blocks, excluding the *anta* blocks. The external face of plinths and orthostates is still rough and unfinished even on the fronts of the *antae*, with the *ancones* still attached.

#### *Pronaos.*

Internal width (from inner edges of wall bases): 4.93 (Orlandos). Depth (including entrance colonnade): 3.06 (Gandy, pl. I: 10 ft. 0.6 ins.). At Rhamnous, then, it is shallower than the *opisthodomos*, 3.6 deep in all. In the Hephaisteion it is much deeper, while at Sounion the two are nearly equal.

<sup>125</sup> My drawing makes them a shade too wide.

<sup>126</sup> This awkwardness does not show on my drawing.

As already explained, I have made the *opisthodomos* about 0.1 too long.



The two *antae* and the columns between them repeat, as I have said, the axial spacing of the east façade. The internal stylobate was as wide as the external and had the same raised patches of rough unfinished stone. But its jointing was quite irregular (Orlandos, pls. IX-X).

The floor, 4.93 by 2.15, was divided into rows of four blocks, each 1.23 by 1.07.

#### *Opisthodomos.*

This was similar. It was 3.60 deep. Gandy makes its depth 11 ft. 5.9 ins. I have not restored its floor.

The secondary base of the two cross-walls equalled that of the side walls. Its blocks were rationally but irregularly spaced. In the east cross-wall, the jointing took some account of the door jambs, as we shall see at once. Only the most southerly block of the west wall survives.

#### *Door to Cella.*

The two central blocks of the secondary base have a projection to the west of about 0.2. This extends for the whole of the largest block, 1.3 long, and for 0.6 of its neighbours on the south. I conclude that the door with jambs was 1.9 wide, and that the wall space on either side was about 1.80 (Orlandos measured it on the north as 1.75). The opening must have been narrow (less than one third of the whole wall), narrower than in the other temples, where it occupied about two fifths of the cross-walls. To observe proportion, I have given it a lintel in the course below the epistyle.<sup>127</sup> This gives the whole door dimensions of 1.9 × 3.8 and the opening of about 1.6 × 3.25.

#### *Floor of Cella.*

The block still in place measures 1.3 by 1.05, and would have been one of seven rows of four such blocks. I am not concerned here with the interruption of the floor by the cult statue. The dimensions of the floor, including the area beneath the supposed projecting base moulding, are about 4.9 by 6.9, which give blocks of 0.97 by 1.23—smaller than our block. Considering the roughness of the floor blocks still surviving, this discrepancy does not alarm me. Our block was the second from the north in the third row.

The markings on the block,<sup>128</sup> ancient but incomprehensible, would lead me from the architecture to the cult of our temple. But on Nemesis, her relation to Pheidias and Perikles, and the amusement all three may have afforded Kratinos,<sup>129</sup> this is not the place to speak; especially as we can no

<sup>127</sup> Incidentally I saw a block that fits the size of my lintel: 0.57 high, 0.74 wide and at least 1.32 long.

<sup>128</sup> Given both by Gandy and Orlandos.

<sup>129</sup> See e.g. Meineke, *Frag. Com. Græc.*, II, 80-6, Thieme, *Quaestiones comicae ad Periclem pertinentes*, Diss.

more date the temple from his comedy than we can the comedy from the temple. At the moment research could probably devote itself with greater profit to the levels of ceiling and floor and to the lower courses of the *cella* walls.

## PART IV

### COMPARATIVE ESTIMATE

The Athenian Democracy called forth high qualities in its artists: a consistently high standard of planning and execution, observance of all those subtle proportions increasingly cherished in the Periclean Age, and, no less than either, that free experiment which makes each of its buildings as individual as an English Cathedral. All these we find even in our three somewhat belittled temples. As they appear there, do they all proclaim the mind of a single architect?

We may leave on one side differences arising probably from cult, such as the relations of *pronaos*, *opisthodomos* and peristyle. These, indeed, are very striking. The west peristyle of both the Hephaisteion and Rhamnous is much smaller than the east, that of Sounion rather larger. The *pronaos* of the Hephaisteion is much larger, that of Rhamnous much smaller than the *opisthodomos*, while at Sounion both are equal. The different dimensions will have influenced the floors, different in all three temples. But these features depend on the client, not the architect. Only in one obvious feature of plan, the twelve columns along the side of Rhamnous, is it probably permissible to trace the architect. This abbreviation of the more usual thirteen became commoner in the fourth century, which reveals it as a matter of taste: and it suited the neatness and symmetry to which Rhamnous, the masterpiece of this architect, aspired. Presumably Sounion retained thirteen because of its cult and the great height of its order.

We must also omit differences arising from scale and material, such as the lack of refinements at Sounion and the blocks of double size at Rhamnous, and also, perhaps, the absence of all sculpture from the pediments and inner frieze at Rhamnous. Nor need we regard as very important the variations between the side *geison* blocks of all three buildings or the differences in jointing between the stylobate of Rhamnous and those of the other two. There are more telling points in favour of common authorship, such as perhaps the re-entrants in the corner blocks of all three stylobates and the similar construction of the pedimental apex at the Hephaisteion and Sounion.

Each building has its minor peculiarities, not easily explained; the

Hephaisteion its joggle-joints and grooves and its system of roof tiling, strange on any theory; Sounion the closely-spaced ceiling beams of its side peristyles and their remarkable crowning moulding, as well as the tilted purlins of its roof; Rhamnous the moulding of its *epikranitis* and the probable undercutting of its orthostates.

But it is possible to explain even some of these on the supposition of a single architect. If, with the best modern authorities, we assume his identity and make the Hephaisteion the earliest, Rhamnous the latest of his known works (we still know too little of the temple of Ares), it is surprising how convincingly we can trace his development. On this assumption I have written the following, which, I hope, will at least present the remaining differences of our temples.

In the Hephaisteion the proportions of *euthynteria* and stylobate are still inelegant. At Sounion they are already perfect, and Rhamnous virtually repeats them. The steps are admittedly projecting and stippled at Sounion and ready for a planing and smooth polish at Rhamnous. But, as Cockerell saw, the finish of the steps depends chiefly on their material.

In its peculiarities of jointing and roof tiling the Hephaisteion is virtually unique. It is possible to suppose they were costly or unsuccessful immaturities, henceforward discarded.

The Hephaisteion observes more nearly the normal Attic foot. Sounion and Rhamnous break away and use a smaller measure common to themselves but to no other temple I know. In Dinsmoor's view the entablature of the Hephaisteion is the earliest we possess designed by our architect. It certainly observes very nearly the proportions of the mid-fifth century. But Sounion and Rhamnous have smaller and at first sight older entablatures. The ratio of height of entablature to height of column, at the Hephaisteion 1 : 2.86, is at Sounion and Rhamnous about 1 : 3—a figure equalled only at the Argive Heraion, built after 420. This, I think, is more significant than the proportion of height of column to width of façade on the stylobate; which, however, I had better give, from my own calculations. At the Hephaisteion it is as 1 : ca. 2.35 (= 5.7 to 13.5), at Sounion as 1 : 2.15 (= 6.14 to 13.2), at Rhamnous as 1 : 2.46 (= 4.1 to 10.1). Here Rhamnous and Sounion are two extremes, but only because of Dinsmoor's law, by which intercolumniation must exceed lower diameter by a constant 0.5. It is therefore unwise to stress the lightness of our temples, especially Rhamnous, as a sign of our architect's character.

The *epikranitis* and ceiling of the Hephaisteion are still straightforward. There is no relation between the unit and the spacing of the ceiling beams. The beams of the peristyles are all equal. West *anta*-returns have no relation to cross-*thranoi*. The ceilings of peristyle and *opisthodomos*, and probably

throughout the building, were level. The internal *epikranitis* lacks the bottom wall found in the peristyles, but was apparently as high. Outer and inner *epikranitis* were in separate blocks. At Sounion the beams were of different heights and given special mouldings, and were spaced at different intervals in end and side peristyles. Single blocks of *epikranitis* extended across the *cella* walls, of which they were in some sense a coping. At the same time the architect provided for different levels of ceiling, the lower for the *cella*. If I am right, the west cross-*thraoi* were brought into line with the west *anta*-returns. At Rhamnous the architect preserved the alignment of the cross-*thraoi* but continued his other experiments. He transferred his most remarkable mouldings from ceiling beam to *epikranitis*. This time he made *pronaos* and *cella* higher, and reserved for them his highest ceiling beams. By contrast, all the beams of end and side peristyles reverted to an equality of cross-section and spacing. But here their axial spacing observed for the first time one unit.

Here, I think, we can claim support for the theory of common authorship. A good architect often reverts several times to the same formal and constructional problems. Blomfield remarked this of François Mansart, and even a casual visitor to his churches may detect the same virtue in Hawksmoor. Our architect shows it in his treatment of the *euthynteria* and ceiling, and something of it in the side walls of his *cellae*. The Hephaisteion is almost straightforward, but Sounion shows the picturesque pseudo-isodomic technique. At Rhamnous the plinth courses are square in cross section and rest, perhaps, on unusual asymmetrical orthostates. Their jointing shows on the *anta* faces. The architect allowed the secondary wall-base a fair external spread, wide enough to take the projections of the east and west *antae*—an arrangement more satisfactory to the eye than that in the other two temples.

Rhamnous in many other ways is more closely knit. Its ceiling observes the unit, and its metope backers also. I believe the actual width of the epistyle soffit is dictated by their spacing. Perhaps the architect, who had observed the normal fifth century width in the Hephaisteion (whose epistyle is proportionately wider than the Parthenon's) and reverted to the narrower, more archaic epistyle at Sounion, was suddenly impressed at Rhamnous by its possible equality to one triglyph and one half-metope.

Rhamnous also affords the neatest interrelation of *cella* buildings and surrounding colonnade. In the Hephaisteion no relation is attempted. At Sounion the intervals across the façade of the *pronaos* are all equal. At Rhamnous the axes of the *antae* and two inner columns are in line with those of the external columns. I have suggested that this shows Ionic influence. This takes us to the most interesting problem that faced our architect, in

common with his contemporaries, Iktinos, Mnesikles and perhaps Kallimachos, the admission of Ionic features into Doric.

The enlarged eastern peristyle with internal cross-frieze, the most striking common feature of our temples, may perhaps derive from Ionic ancestors. It is clearly made possible only by the alignment of *antae* and side columns, as in Ionic plans: and in the Hephaisteion and Sounion it was emphasized by an Ionic frieze and mouldings. At Rhamnous, I contend, the decoration may be dropped but the influence persists in a subtle form.

Our architect otherwise tends with experience to deprive the exterior of Ionic ornament but to redouble this internally. The moulded external wall-base, continuous on the Hephaisteion, has shrunk at Sounion to a tiny decoration of the *antae* and has disappeared altogether at Rhamnous. But at Sounion Doric colonnades have vanished from the *cella* and at Rhamnous, I believe, its decoration was chiefly provided by Ionic guilloche and other base-mouldings. Bassae and Rhamnous, both ancestors of Tegea, will have observed externally the severest Doric canons, only to abandon the *cella* to an exercise in Ionic. A mixture of features on the same length of wall was increasingly deemed impossible. One laments above all the disappearance of the West Chamber in the Parthenon which, I believe, was the pioneer in the resulting development.

Robertson frequently notices a failure, which he regards as almost culpable, to effect a fruitful union of Ionic and Doric. Had this been possible, we may rest assured Athens would have achieved it. The time and city were favourable. Works such as the Throne of Amyklai, one may agree, were charming eccentricities. But their direct attack on the problem, no less than the incomparably cruder 'reconciliations' of Roman times, was open to the criticism of the cultured:

δξος τ' ελαιοφά τ' ἐγχείας ταύτῃ κύτει  
διχοστατοῦντ' ἄν οὐ φίλως προσεννέποις.

Athenians surely blent their modes and styles with greater knowledge and restraint. I am content to await the answer of Damon.

W. H. PLOMMER

## SOME OBSERVATIONS ON THE ORIGIN OF TRIGLYPHS

The origin of the Doric triglyph has been long a subject of dispute, and the problem is briefly this.\* The earliest stone triglyph that we have is dated to *circa* 600 B.C., and there is no direct evidence for earlier examples in other materials except in the temples at Thermon and Calydon, where terracotta metopes were found dated by their style to *circa* 640 B.C., the Calydon examples being slightly the later of the two. Undecorated terracotta metopes were found in the seventh century temple at Gonnos; on these see below. The spacing of the columns in the Heraion at Olympia, which shows contraction at the angles, has been adduced as evidence of a triglyph-frieze; but the earliest stone column cannot have been put in before 600 B.C., and the existing contraction may be the result of a later arrangement.<sup>1</sup> Pottery of 600-590 B.C. has been found beneath the present structure.<sup>2</sup> Yet the form of the Doric triglyph remained without variation for over four centuries, although it gives many indications of being unsuited to the material in which it has survived. This, it is argued,<sup>3</sup> points to at least as long a period of development before its appearance in stone at the end of the seventh century. What determined this form, and in what material it was developed, are the two questions confronting students of this problem.

To consider the question of the material first, there are three possibilities open to us: terracotta, wood and sundried clay. The triglyph is a structural member, and terracotta would not therefore be a practicable material, being brittle and unable to take much strain. We know of three examples only of terracotta triglyphs, probably mere facings, and all dated to the early sixth century.<sup>4</sup> Wood has been the material most often chosen in reconstructions and consequently many alternative suggestions involving wood are offered us, but all are open to objection. Perhaps the most widely accepted is that first put forward by Vitruvius (IV, ii and iv), that the triglyph represents the ornamental facing of the end of a beam. The objections are three-fold: firstly, the scale of such beams in early temples is impossibly large; <sup>5</sup> secondly, the ceiling inside the porticoes of stone temples is invariably on a level with the top and not the bottom of the triglyph-frieze; <sup>6</sup> and

\* Angle contraction does not appear in Greek architecture until *circa* 540 B.C. (Temple of Apollo at Corinth).

<sup>1</sup> Dinamoer, *AJA* XLIX, 62.

<sup>2</sup> Holland, *AJA* XXI, 117.

<sup>3</sup> At Thermon, Elis, Olympia (Van Buren, *Greek Fictile Remnants in the Archaic Period*, 35).

<sup>4</sup> Holland, *op. cit.*

<sup>5</sup> A feature first noted by Viollet-le-duc.

\* I should like to thank all those who have made this article possible, especially Professor D. S. Robertson, Mr. J. M. Cook, and the Council of the Hellenic

Society (for permission to reproduce fig. 2); also Mr. D. G. Fenter for the illustrations, and those who have read it through and helped me with suggestions.

thirdly, in all known Doric buildings the frieze continues round sides and façade at the same level, instead of being one course higher, as would be the case with longitudinal and transverse beams. If these beams were kept at the same level by means of scarf-joints, the beam-ends would not be adjacent at the corners, as triglyphs are by an invariable rule. This rule also precludes the possibility that triglyphs represent windows, as has been suggested;<sup>7</sup> and the latter two objections are valid against the theory of three planks bound side by side, chamfered at the ends to produce the appearance of a triglyph.<sup>8</sup> If the triglyphs represent a series of wooden posts with spaces left between for light and air to enter the temple, their scale would again be impossible, and there is little or no point in the posts being constructed in wood. It is more likely, to judge from the construction of stone triglyphs, that the triglyph is treated as a plaque attached to the wall behind (it is so treated in the temple of Demeter at Paestum, *circa* 530 B.C.) and probably secured by the *guttae* (obviously a wooden form) through the *regula* and *taenia*. Could this plaque have originally been of wood? Holland,<sup>9</sup> supported by Washburn,<sup>10</sup> states that 'the manufacture of boards is rare and difficult among primitive peoples', and therefore suggests that three separate bars of wood went to the making of each triglyph. No reason is given for the number three rather than any other, nor for the chamfering or grooving of the bars. A passage of Euripides<sup>11</sup> is often quoted in defence of a wooden origin, for he speaks of fastening a head by pegs to the triglyphs of a temple. Wood, however, is not the only material into which pegs may be driven, and the dramatist in question lived after all in an age of marble temples.<sup>12</sup>

The only other possible material is unburnt clay: this is not merely the only alternative open to us, but has some evidence to support it. In the very earliest stone triglyphs which we have, from the temple of Apollo at Cyrene<sup>13</sup> and from Corcyra,<sup>14</sup> dated respectively to *circa* 600 and 590 B.C., the grooves curve over at the top into a pronounced Doric hawkbeak. This suggests a fictile, rather than wooden, origin, and though the function of this overhang is doubtful, it must in fact have afforded protection to the delicately moulded grooves, since it is in these that traces of the original paint have often been found. The use of paint on stone is sometimes said to indicate a wooden original, but sundried clay was likewise painted as a protective measure, as we can tell from the Perachora temple-models and

<sup>7</sup> 'Nam in angulis contraque tetraentis columnarum triglyphis constituantur, quibus in locis omnino non possunt res fenestras fieri. Dissolvuntur enim angulorum in aedificiis iuncturae, si in is fenestrarum verint lumina relicta.' Vitruvius, *loc. cit.*

<sup>8</sup> Rodenwaldt, *Korcyra*, I, 75.

<sup>9</sup> *Op. cit.*

<sup>10</sup> *AJA* XXIII, 46.

<sup>11</sup> *Bacchae* 1214.

<sup>12</sup> The other passage of Euripides (*Iphigenia in Tauris* 213) has been satisfactorily emended by Blomfield, and refers to the spaces between the rafters and the pitched roof.

<sup>13</sup> Petznier, *Il Tempio e l'altare di Apollo a Cirene*, figs. 37-41.

<sup>14</sup> Rodenwaldt, *op. cit.*, I, 34, fig. 17.

from other evidence. Early triglyphs have sharply pointed grooves, in contrast to the rounded flutes on the shafts of Doric columns, which were, as is generally admitted on the evidence of Pausanias and the proportions of early examples, originally of wood. On the François Vase (FIG. 1) we see two buildings depicted,<sup>15</sup> in which the columns would appear, from their slender proportions, to be of wood. Their shafts are rendered in black, and so are the triglyphs, *taenia*, architrave, metope-caps and pediment, while the

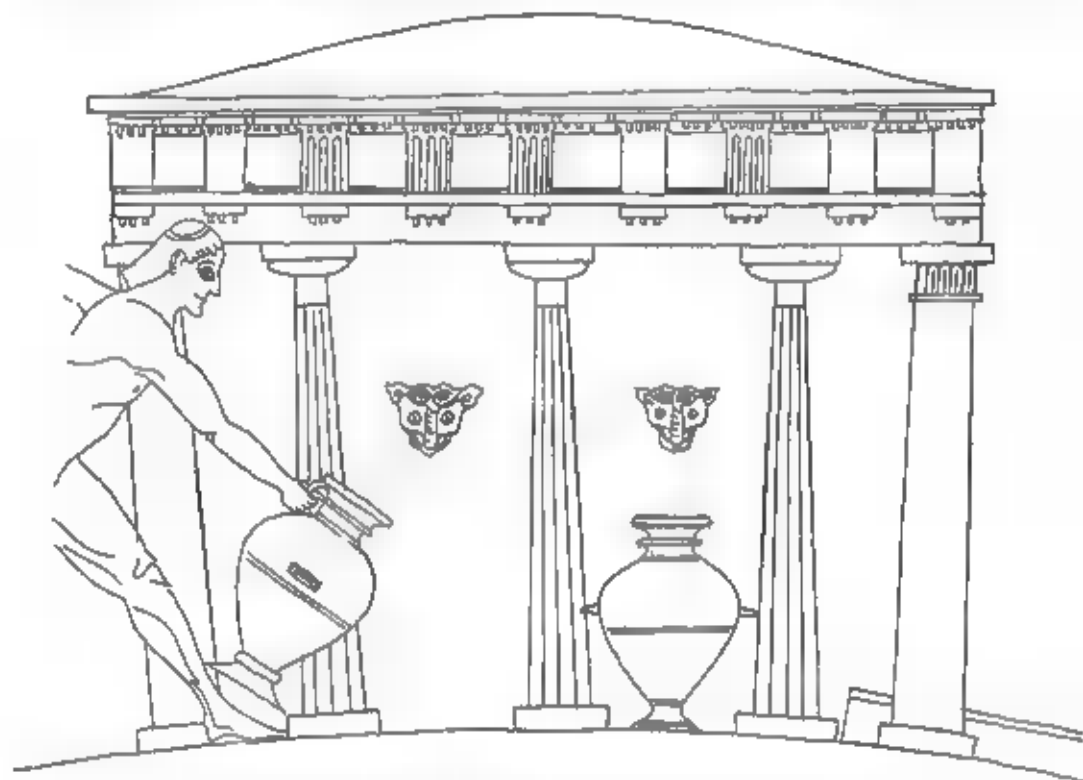


FIG. 1.—FOUNTAIN HOUSE FROM THE FRANÇOIS VASE.  
(After Furtwängler-Reichhold, B, pl. 11.)

capitals down to the necking-band, the *abaci*, metopes and both cornices are white. Both columns and *antae* stand on raised white blocks. Assuming that the colouring is significant and that white indicates stone, we may accept H. Sulze's theory<sup>16</sup> that the wooden shafts were surmounted by stone capitals and *abaci*, over which ran the wooden architrave. But does the colour black indicate wooden triglyphs? In the fountain-house the curved black mould that constitutes the tympanum of the temple (interrupted by the

<sup>15</sup> FR B, pl. 2, and 11.

<sup>16</sup> AA 1936, 14.



ornamental border) is seen in its entirety, and it has no raking cornice above it. In fact, it represents the type of roofing probably at least as old as the Mycenaean megaron: which is an alternative to the pitched roof—a slightly curved mud roof. Thus the artist has used black both for wood and clay members, and the triglyphs may be of either material.

We come then to the question of what determined the form of the triglyph. The best approach to this problem lies in the study of the rules appertaining to stone triglyphs, the vital point being that these rules are irreconcilable. They are as follows:

- (a) Two triglyphs must be in contact at the corner.
- (b) One triglyph must stand over each column and one over each intercolumniation.
- (c) The centre of the triglyph must be aligned with the centre of the column or intercolumniation.

It is plain that unless the width of the triglyph exactly corresponds with the width of the architrave beam, one of the rules must be broken at every angle. The triglyph was in fact usually narrower than the architrave beam, and as the first two rules were inflexible, the third was generally broken, and the angle triglyph was not centred over its column. This meant adjustments not only in the triglyph-frieze but in the spacing of the columns also, and led to the angle-contraction mentioned above. The problem of the angle triglyph in fact remained insoluble. This led eventually, after a period of refinements which produced the Parthenon, to the decline of the Doric style, which can thus be shown to have been inevitable as soon as the style was translated into stone in the sixth century B.C. One at least then of these irreconcilable rules must date from that translation and derive from the special requirements of stone construction, and the choice must fall on the latter two (Rules *b* and *c*). In a stone-built temple the architrave block spans from column to column, the join between it and the next block occurring over the centre of the column: on the next course (the triglyph-frieze) a block must stand with its centre over the join. Triglyphs rather than metopes stand over columns because, by Rule *a*, a triglyph must stand over the angle column. In the early temple on Ortygia (*circa* 575 B.C.) the columns are so closely spaced that it is conjectured that triglyphs stood only over the columns, as in the building under the Treasury of Sicyon at Delphi, identified by Dinsmoor<sup>17</sup> as the old Treasury of Syracuse. The appearance of triglyphs centred over intercolumniations must be due either to the architrave blocks spanning only half the distance from column to column on the cantilever principle, thus causing

<sup>17</sup> *BCH* XXXVI, 439.

a join over each intercolumniation as well as over each column, or to tradition in the proportions of the triglyph-frieze (a more likely explanation).

That the position of triglyphs centred over columns and intercolumniations is dictated by constructional necessity in rectangular stone buildings, is plain from a study of structures with curved walls and no *pteron*, and from vase-paintings representing early buildings with wooden columns. Metopes of terracotta were found in the seventh century temple of Athena at Gonnos<sup>18</sup> in Thessaly, the plan of which is horseshoe-shaped and includes no columns.

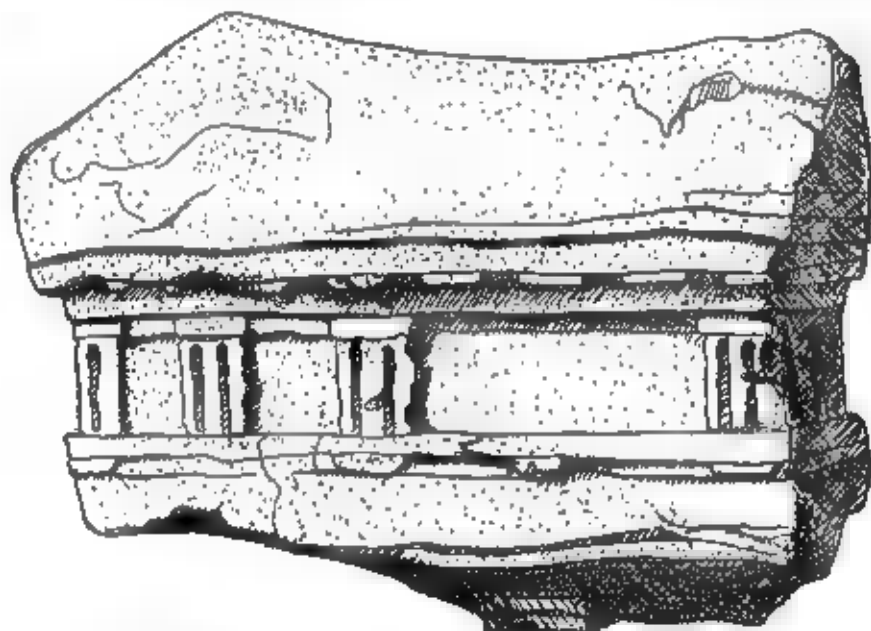


FIG. 2.—FRAGMENTARY APSIDAL TEMPLE-MODEL FROM SPARTA.  
(After *Artemis Orthia*, pl. 72, 194.)

The Old Tholos at Delphi,<sup>19</sup> which had thirteen columns in a ring, had nevertheless a frieze of twenty triglyphs and twenty metopes, if indeed the columns did surround it, for Courby<sup>20</sup> argues that the frieze must have rested on a wall. A fragmentary apsidal temple-model from Artemis Orthia<sup>21</sup> (FIG. 2) has roughly spaced triglyphs running round both façade and apse. The model is dated to the sixth century, and probably shows the arrangement of the triglyph-frieze used in apsidal buildings of the same century, such as those on the Acropolis at Athens and under the Temple of Apollo Patroos in the Agora, and certainly in the Bouleuterion at Olympia;

<sup>18</sup> *PAE* 1810, 241 and 1911, 286, 315.

<sup>19</sup> P. de la Coste Mesnière, *Au Musée de Delphes*, 50.

<sup>20</sup> *BCH* XXXV, 192.

<sup>21</sup> *Artemis Orthia*, pl. 72, 194.

at Corinth the fifth century Temple B and temple under the North Building of earlier date, may have had a similar arrangement. On the François Vase the shrine has three triglyphs over the intercolumniation at the centre of the façade, and in the fountain-building the triglyphs are not centred over columns or intercolumniations. On a hydria in the British Museum dated to 520-500 B.C. is a portico with fourteen triglyphs on a tetrastyle *in antis* façade. A pinax from Locri<sup>22</sup> dated to the first half of the fifth century shows ten 'tetraglyphs' over a distyle prostyle porch. Rectangular buildings with columns only on the façade<sup>23</sup> had, as a rule, the triglyph frieze continuing round the sides, although here the proportions and spacing would probably have been determined by the columns on the façade.

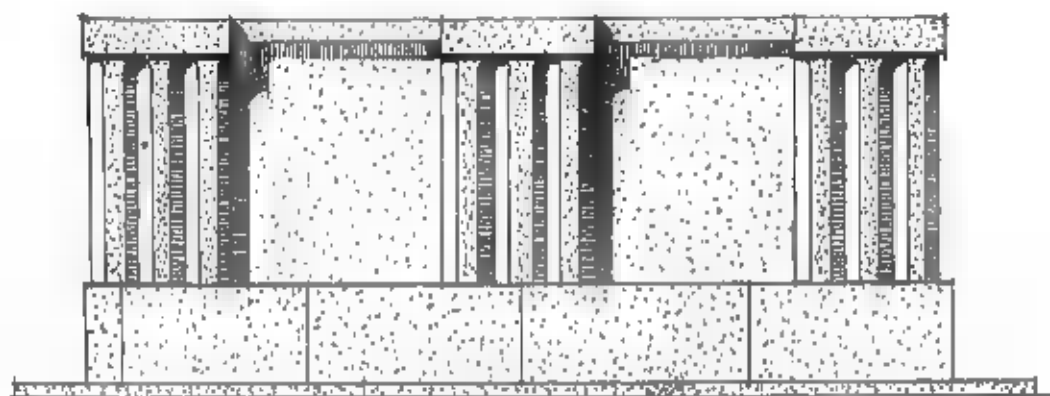


FIG. 3.—TRIGLYPH ALTAR FROM CORCYRA.

(After Rodenwaldt, *Korkyra* I, 65, fig. 49.)

Apart from these examples there is a class of triglyphs never connected with columns, namely those which occur on triglyph altars. It may be thought that the triglyph motive was transferred from the friezes of temples to a position near the ground; but in fact the appearance of stone triglyphs on the frieze of temples and on altars is practically simultaneous. The oldest stone triglyphs, after the example found at Cyrene, come from the temple at Corcyra<sup>24</sup> and contemporary with this temple (*circa* 590 B.C.) is a large triglyph altar (FIG. 3). It is connected with two similar altars at Syracuse<sup>25</sup> by the fact that the frieze stands on a low architrave instead of a plinth as in later examples. Various fragments indicate the existence of other altars

<sup>22</sup> *Palladio* IV 2, 49, fig. 1.

<sup>23</sup> Such as the late seventh century Treasury of Kypselos at Delphi, the temple of Aphaia at Aegina and that of Athena Polias on the Acropolis at Athens (both contemporary with the François Vase, *circa*

560 B.C.); but not the sixth century Megarian Treasury at Olympia.

<sup>24</sup> Rodenwaldt, *op. cit.*, I, 34.

<sup>25</sup> *MA* XXV, 118, fig. 250.

at Aegina,<sup>26</sup> at Porto Raphti in Attica,<sup>27</sup> and at Olympia:<sup>28</sup> the series continues with the example from Perachora<sup>29</sup> at the end of the fifth century, and the large altar at Megalopolis<sup>30</sup> in the fourth century. The triglyph wall round the Sacred Spring area at Corinth<sup>31</sup> cannot be dissociated from this series, and indeed Payne<sup>32</sup> says that 'the origin of the triglyph-metope frieze at ground level is to be sought in Corinth', since the earliest stone examples are found in Corinthian colonies. There is a literary tradition that the pediment was a Corinthian invention, and when we consider the early (circa 540 B.C.) Doric stone temple of Apollo at Corinth, the first temple to show angle contraction,<sup>33</sup> and the pioneer Doric stone temples of the early sixth century at the Corinthian colonies of Syracuse and Corcyra, it appears that the tradition of the Doric style of architecture was especially strong at Corinth.

To sum up: triglyphs were not necessarily centred over, or even connected with, columns, but this rule was imposed by constructional necessity when the frieze was translated into stone. Similarly the theory<sup>34</sup> that the triglyph represents a pilaster upholding the roof as the columns uphold the entablature (because its grooves make it resemble a column), based on the fact that certain early triglyphs show a reduction of width towards the top, can be answered by the argument of constructional convenience. The metopes were fitted into position from above, and the reduction would allow them to slide neatly in without damaging the upper parts of the triglyphs. If the two rules connecting triglyphs with columns are traceable to constructional reasons in stone buildings, then the rule that conflicts with them must have governed triglyphs before they were translated into stone. This is the rule that two triglyphs must be in contact at each corner, a rule that is never broken either on the entablature or on altars. Assuming with Holland that the triglyph took at least four centuries to develop before 600 B.C., is there any trace of this feature in extant buildings of much earlier date from which the tradition could have originated?

The answer lies in a series of stone benches, which begins in the Minoan palaces of Crete, spreads to the mainland of Greece, and continues after the downfall of the ancient civilization, in temples and shrines. The connection with the triglyph-frieze is found in the fact that the ground-plans of these benches show projecting blocks at regular intervals along their face and always at the corners. There are numerous examples of such benches,<sup>35</sup> but

<sup>26</sup> Rodenwaldt, *op. cit.*, I, 67.

<sup>27</sup> *AM* LII, Beil. 18.

<sup>28</sup> *Olympia* II, 164, pl. 95, viii. Also cf. *BCH* LXI 421, for examples at Ieraka and Delos.

<sup>29</sup> Payne, *Perachora* I (1940), 89.

<sup>30</sup> *Excavations at Megalopolis*, 51.

<sup>31</sup> *AJA* VI, 306.

<sup>32</sup> Payne, *op. cit.*, 89.

<sup>33</sup> With the possible exception of the Heraion at Olympia: see above.

<sup>34</sup> Signora Zancani-Montuoro in *Palladio* IV 2, 49-64.

<sup>35</sup> Karo and Pernier, *Antiquités Crétoises*, pls. 5, 7, 8; *BSA* VII, 54; Mosso, *Excursioni*, 44, 59, 97; *Darm. Baukunst der Griechen* (ed. 3), 67 fig. 35; Noack, *Baukunst des Altertums*, pl. 16 etc.; *MA* XIV, 405.

by far the most interesting are two found at Phaistos and Tiryns respectively. At Phaistos (FIG. 4) the proportions of the projecting blocks and of those set back correspond to the proportions of the *triglyph*, the projecting blocks being higher than they are wide and the blocks set back wider than they are high. The bench runs round three sides of a room, and two projecting blocks are adjacent at each of the corners. The decoration consists of three sets of vertical grooves on the projecting blocks and two sets of horizontal grooves on the others. The material, which is gypsum, is specially suited for the carving of grooves. The significance of the threefold decoration of the projecting uprights has been noted before, and Pernier saw in the bench a

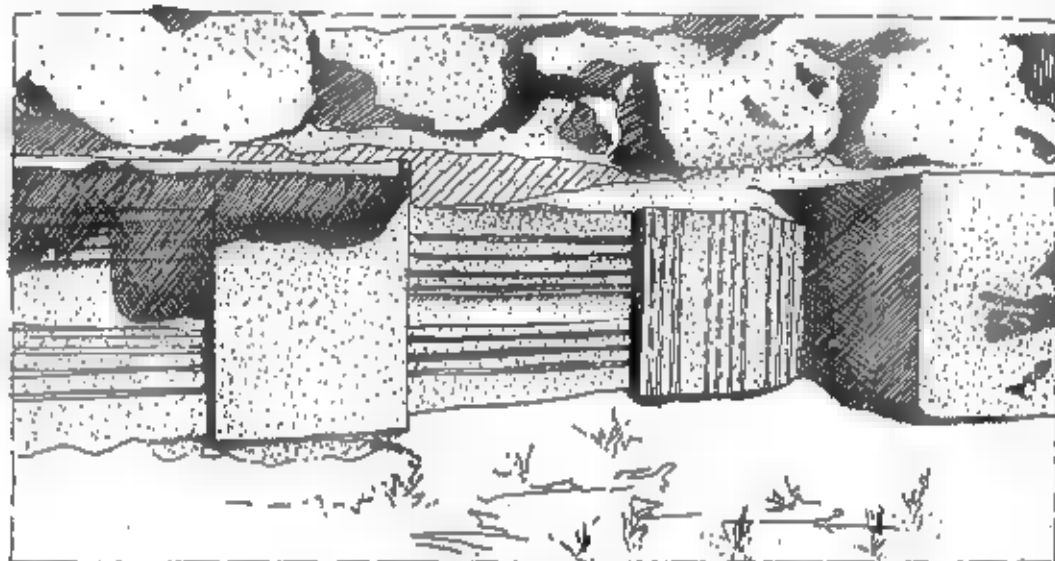


FIG. 4.—MINOAN STONE BENCH AT PHAISTOS.  
(After Pernier, *MA* XII, 48, fig. 13.)

prototype of the Doric *triglyph*; while the architect Theodore Fyfe<sup>36</sup> describes the pattern as 'what one might call a duplicated triglyphon on the breastwork of stone seats' and quotes it in connection with painted plaster decoration at Knossos as evidence 'from which it does indeed appear probable that this motive might have formed a basis for the Doric triglyph'. This theory has been rejected<sup>37</sup> on the grounds that it is too far a cry from Minoan benches to Doric temples; but I hope to show that the connection is not as remote as it may seem.

The well-known gypsum bench-front from Tiryns was also examined by Fyfe, who stated that the long blocks are grooved into the projecting blocks

<sup>36</sup> *JRIBA* X, 127.

<sup>37</sup> Holland, *op. cit.*, 124.

in exactly the manner of the *triglyphon*. Here again the tall uprights bear a threefold pattern of vertical strips, carved and inlaid with small rosettes. The long blocks bear an elaborate version, inlaid with *kyanos* (blue glass paste), of the well-known 'half-rosette' motif, which links our benches with the many contexts in which this motif occurs. Deriving perhaps from a Hittite symbol connected with ancestor worship and quickly developing into a semi-floral pattern, this motif, consisting of two elongated half-rosettes alternating with a three-barred vertical pattern, was being painted in frescoes at Knossos<sup>38</sup> as early as M.M. III, and was soon copied on the mainland of Greece in hard materials such as stone,<sup>39</sup> bronze,<sup>40</sup> gold,<sup>41</sup> ivory,<sup>42</sup> glass-paste<sup>43</sup> and in seal-stones.<sup>44</sup> The dominant colour in the motif was usually blue (as it is on early triglyphs, though here the blue may be intended to reproduce the colour of the earlier clay plaque), and its position is frequently in a vestibule or entrance. Holland<sup>45</sup> would argue that the motif never occurred high up, but always at ground-level; but of the nine examples in which there is any indication of position, six are high up and only three at ground-level. They are as follows:—

(i) Knossos (*PM* II 2, 591-4; *BSA* VII 55, fig. 16). A continuous stone frieze of red porphyry-like stone, with the uprights in bluish stone, from a vestibule, 'probably high up because of the strong dowel-holes for attaching it to timber'. M.M. IIIa.

(ii) Knossos (*PM* II 2, 604, fig. 377; Fyfe, *op. cit.* pl. II 5). Fresco showing frieze immediately below a coping of sacral horns. Early M.M. III.

(iii) Knossos (*PM* II 2, 597; *JHS* XXI pl. V). Fresco showing shrine with frieze below coping of sacral horns. Late M.M. III.

(iv) Mycenae (Perrot and Chipiez, *Art in Primitive Greece* II, fig. 272, pl. IV). Continuous stone frieze of red marble, from above relieving triangle of Treasury of Atreus. L.H. II or III.

(v) Tiryns (Rodenwaldt, *Tiryns* II, 137, fig. 58, pl. VI 5). Fresco showing motif in connection with architectural elements 'apparently high up'. L.M. I-III.

(vi) Orchomenos (Bulle, *Orchomenos*, pl. XXVIII, 1; *AJA* XXI,

<sup>38</sup> Fyfe, *op. cit.* pl. II figs. 2-5, p. 125, figs. 60-61. Cf. Pernier, *Il Palazzo Minoico di Festos*, II, pl. XL, 1 and 3, for examples from Phaistos.

<sup>39</sup> Robertson, *Greek and Roman Architecture*, fig. 14 and Perrot and Chipiez, *op. cit.* I, fig. 224; *BSA* XXV, 296, fig. 47a. Also frescoes from Tiryns (Rodenwaldt, *Tiryns* II, 56, no. 66) and Mycenae (*BSA* XXIV, pl. VII, 2, and p. 192).

<sup>40</sup> A knife from Menidi, Perrot and Chipiez, *op. cit.* II, fig. 368.

<sup>41</sup> Miniature shrine from Mycenae, *PM* II, 597.

<sup>42</sup> Plaque from Mycenae, Perrot and Chipiez, *op. cit.* I, fig. 223; from Delos, *BCH* LXXII-III, 190, fig. 14 and ref. in n. 2.

<sup>43</sup> Ornament from Menidi, Robertson, *op. cit.* 31 fig. 14.

<sup>44</sup> From Tiryns: *BCH* LXI, 428, fig. 11; from Mycenae, showing Lion Gate: Bossert, *Art of Ancient Crete*, fig. 304c.

<sup>45</sup> *Op. cit.*, 128.

120, fig. 2). Fresco showing motif associated with architectural members and above circles and chequers. Fourteenth century.

At ground-level are:

(vii) The Tiryns bench (L.H. III).

(viii) A fresco from Mycenae<sup>46</sup> in ■ corresponding position running round the base of the wall in the N.E. angle of the porch of the *megaron* (L.H. III).

(ix) A fresco on either side of the throne in the Throne Room at Knossos,<sup>47</sup> on a background of mock-marble (post-M.M. III).

Thus, like Doric triglyphs, the half rosette motif with its three vertical bars, is found both high up and at ground-level, and was specially suitable to the proportions of the Cretan bench.

It may be asked, what was the origin of the three-barred motif, and what determined the form of the Cretan bench? The three bars may have had some religious significance now lost to us,<sup>48</sup> or they may have come from elsewhere with the half-rosette scheme, perhaps as some symbol; or they may merely be three for the sake of balance, three being the ideal number in architecture. As regards the bench, the rule that the projecting blocks are placed invariably at the corners may suggest an interpretation: the bench was originally a wooden plank laid across two or more uprights (of which one would come naturally at each end). When this form was translated into stone the seat-slabs would tend to break unless supported from beneath; thus the gap or gaps between the supporting uprights would be filled in, but the face of the filling would be set back, partly as being a secondary development and partly, of course, to allow for the heels of the occupant.

We have much evidence that after the fall of the Minoan and Mycenaean civilizations the palaces and tombs became places of worship and that temples built then in meaner materials did reproduce the plan of the *megaron*. This is clear from a comparative study of ground-plans, the three commonest types being the rectangular with single row of inner columns, the rectangular without columns, and the apsidal. The first type appears in Middle Helladic houses<sup>49</sup> and in the Late Helladic successor to the *megaron* at Tiryns,<sup>50</sup> as well as in Building VIc at Troy.<sup>51</sup> It continues through the ninth (eighth?) century temple of Artemis Orthia at Sparta,<sup>52</sup> the eighth (or seventh) century temple of Apollo Korynthios at Korone and the seventh century temples at Neandria, Dreros, Prinias, Lokroi, Thermon, and probably Gortyn, and

<sup>46</sup> BSA XXV, 235, fig. 46.

<sup>47</sup> PM II 2, 608.

<sup>48</sup> As, perhaps, had the tripods found in Cretan shrines.

■ Blegen, *Korakou*, 86, House L.

<sup>50</sup> Blegen, *op. cit.*, 131, fig. 135.

<sup>51</sup> Destroyed 1300 B.C.

<sup>52</sup> BSA XIV, 1.

the Oikos of the Naxians at Delos, to the *megaron* on the acropolis of Selinus (circa 600 B.C.), the 'Basilica' at Paestum (circa 565 B.C.) and the temple of Apollo Daphnephoros at Eretria (circa 550 B.C.). The second type occurs at Karphi (circa 1000 B.C.), Dreros (eighth century), Perachora (Hera Limenia, second half of the eighth century), Larissa, Vroulia in Rhodes, the first temple of Apollo at Delos, the temple of Demeter Malophoros at Gaggera near the site of Selinus, a building at Agrigento and two small temples on Mt. Kotilios near Bassae (all of seventh or sixth century). The third type can be traced back to Middle and Late Helladic buildings at Korakou, Tiryns and Olympia. At Orchomenos such buildings lie beneath rectangular structures. At Thermon the Middle (Late?) Helladic apsidal Megaron A is superseded by the rectangular Megaron B (of approximately the tenth century B.C.), the walls of which were slightly curved and were surrounded by an apsidal pteron. The seventh century temple of Apollo on the same site, though rectangular, resembled apsidal buildings in having only one pediment. This site alone shows the continuity in building traditions from the earliest times. Another early apsidal structure is the temple of Hera Akraia at Perachora (late ninth century), and the apsidal temple models from the same site give us an idea of the elevation. The temple of Apollo Ismenios at Thebes (ninth century) may have been curvilinear; and the series continues into the sixth and fifth centuries with buildings and the temple-model of apsidal plan mentioned above. In addition to the continuity implied by these three groups, the plan of the Mycenaean *megaron* is reproduced in most early Doric temples, that is to say, a room with a central door giving on to a porch distyle *in antis*.

It is not surprising, therefore, to find the bench of the ancient palace becoming the altar<sup>63</sup> of the post-Minoan temple. In fact, such benches were already used as altars in Late Minoan times, in shrines and rooms set apart for worship in the palaces. At Hagia Triada,<sup>64</sup> cult-objects were found standing on such a bench in a L.M. I shrine; and the bench had all the normal characteristics I have enumerated above. Along its face were upright blocks at regular intervals and at the angles, and it was originally covered with painted stucco decoration, which, had it been preserved, would probably have proved most interesting. Similar benches in shrines occur at Mallia (L.M. I), Gournia (L.M. I-III), Knossos and Gazi (L.M. III), and Phaistos (M.M. III-L.M. I): on the mainland at Asine (L.H. III), and in Cyprus at Hagia Eirene (L. Cypriote III). The series continues with a Proto-geometric example at Karphi, the stone bench at the end of the *cella* of the ninth (eighth?) century temple of Artemis Orthia at Sparta, a seat for the

<sup>63</sup> Or offering table. Yavis, *Greek Altars*, 58.

<sup>64</sup> *Ann. (N.S.)* III-IV, 9.



cult-image in the Delphinion at Dreros<sup>55</sup> (eighth century), and benches at the back of seventh century temples such as the oldest Heraion at Delos, the Hephaisteion on Lemnos and Temple A at Prinias. Frickenhaus<sup>56</sup> believes that the bench in the porch of the Mycenaean megaron at Tiryns was used for offerings as late as the seventh century, and though his supposed temple of that date is considered by Blegen<sup>57</sup> to be a Late Helladic structure, the bench may indeed have been so used for some time after the fall of the Mycenaean civilization.

The bench-altar, conceived as a seat for the cult-image and as a table for offerings; and probably bearing traditional decoration, is thus a feature of religious architecture from Late Minoan times until the late seventh century B.C., shortly after the end of which appeared the first stone triglyph-altar. That triglyph-altars were also considered as benches can be seen from representations of them in vase-paintings; on an Italiote amphora from the Campana Collection in the Hermitage<sup>58</sup> two women are seated on just such an altar, and on a Paestan vase, of about 340 B.C. or very soon after, now in the British Museum and formerly in Castle Howard,<sup>59</sup> Alkmene is seated on an altar with a band of triglyphs along the top, as was the arrangement on the altar of Zeus Meilichios at Pompeii.<sup>60</sup> The Etruscans appear to have adopted and used the triglyph-motif on sarcophagi, decorating the 'metopes' with circular floral devices, as for example on the terracotta sarcophagus of Scianti Hanunia in the British Museum,<sup>61</sup> which shows Greek influence. Here the figure reclines on the lid of the sarcophagus, the proportions of which are almost those of a triglyph-altar. The idea of an altar combining the function of a seat or throne was not a strange one to the Greeks (cf. e.g. the Ludovisi Throne, which also bears decorative reliefs), and it does seem likely from the reproductions in vase-paintings that the idea of a bench is inherent in triglyph-altars, though such altars would not of course be used normally as public seats, but under certain conditions only (e.g. when taking sanctuary as with the figures on the Italiote amphora mentioned above).

If the triglyph altar is a direct descendant of the bench-altar, which itself derives from benches in Minoan and Mycenaean palaces, how is it that we have no trace of the motif during the Dark Ages? The answer is, of course, that just as buildings and temples during that period were built of cheap and perishable materials, so the decoration of altars, fixed by tradition and religious conservatism, would be carried out in the cheapest material to hand, sundried clay, of which temple walls were normally constructed down

<sup>55</sup> BCH LX, 193, fig. 5.

<sup>56</sup> Tiryns I, 37.

<sup>57</sup> Korakou, 131.

<sup>58</sup> Reinach, *Répertoire des Vases peints grecs et étrusques*, I, 161.

<sup>59</sup> JHS XI, 226, pl. VI. Trendall, *Paestan Pottery*, 56, pl. 15.

<sup>60</sup> And on many other classical and post-classical altars (Vais, *op. cit.*, 139).

<sup>61</sup> Walters, *Cat. of Terracottas in B.M.*, D786.

to the end of the seventh century. Thus all direct evidence for the decoration of altars during this period has vanished. As soon as temples began to be built in stone without windows, the altar (on which sacrificial fires were lit) would be moved outside and become free-standing, instead of resting against the inner wall of the temple; the earlier temples with clay walls had vents to allow the smoke from the altars inside to escape, as we can tell from the temple-models from Perachora and the Argive Heraion. The question now arises, when and why was the frieze on bench-altars transferred to the entablature? Our first direct evidence for its appearance high up is at Thermon, *circa* 640 B.C.; but I am inclined to think that as the half-rosette frieze is often found high up (see above), the tradition of the frieze at both levels may have continued, perhaps in Crete, where Pernier finds strong Minoan associations in post-Minoan architecture, and perhaps at first in stucco or paint, and later expressed in unburnt clay plaques bearing the three vertical bars which form the basic feature of the design.

I would, therefore, suggest that Doric triglyphs owe their form, arrangement, and probably their position at both high and low levels, to a tradition at least as old as M.M. III, and that these characteristics were preserved during the Dark Ages in materials now lost to us; and that when this traditional motif was again rendered in harder materials from 600 B.C. onwards, the rules governing its proportions and arrangement so conflicted with the rules of stone construction as to bring about the eventual downfall of the Doric style.

M. L. BOWEN

## THE ALPHABETIC NUMERAL SYSTEM IN ATTICA

When, in 1913, I published in this *Annual* (XVIII, 98 ff.) an account of the acrophonic numeral system in the Greek world, I hoped that within a short time I should be able to give a similar description of the other main system, the alphabetic. Owing to unforeseen difficulties, including two World Wars, that hope has not yet been realized, though I have contributed to the *Annual* two supplementary articles on the acrophonic numerals (XXVIII, 141 ff., XXXVII, 236 ff.), nor can I even now offer more than a first instalment of my study of the alphabetic system, in which I confine myself strictly to Attica, leaving to a separate article (which will, I hope, follow without undue delay) some account of those numerals as used elsewhere. A careful and detailed study of the subject appeared in 1902 in W. Larfeld's *Handbuch der griechischen Epigraphik*, II, 543 ff. (cf. the same scholar's *Griechische Epigraphik*<sup>3</sup>, 290 ff.), but Larfeld's treatment, which deals both with the acrophonic and with the alphabetic system, is not everywhere clear and satisfactory, while since its publication much new evidence has come to light and the whole of the Attic epigraphical material has appeared in the second edition of *IG*, making reference to the relevant texts much easier.<sup>1</sup> In the following pages I cite inscriptions contained in *IG* II<sup>2</sup> simply by number and, where necessary, line; those cited from other sources have a title prefixed, usually *Hesp.* (= *Hesperia*), cited by volume and page. In indicating dates I follow the example of Liddell and Scott, using Arabic figures to denote years and Roman to denote centuries; thus, e.g., ii A.D. = the second century of the Christian era.

*The available evidence.*—For the purpose of the present discussion I have examined more than 15,500 Attic inscriptions, including all those comprised in the *editio minor* of the Attic Corpus (*IG* I<sup>2</sup> and II<sup>2</sup>) and in the first seventeen volumes and seven supplements of *Hesperia*, in which have appeared a large number of texts discovered in the course of the fruitful American excavations in the Agora and on the north slope of the Acropolis.

It must be candidly admitted that the amount of the evidence thus afforded is surprisingly and disappointingly small, and the following reasons may be suggested as helping to account for this paucity:

(a) Numbers might be, and often were, written out in words, a method which, while demanding greater trouble and more space, might well be

<sup>1</sup> Far shorter and less satisfactory than Larfeld's account ■ that of E. S. Roberts and E. A. Gardner, *Introduction to Greek Epigraphy*, II, 475 f., while that

given in Meisterhans-Schwyzler, *Grammatik der attischen Inschriften*, 11, is not only meagre but misleading.

regarded as more dignified than the use of numerals, and less liable to misunderstanding or alteration. It is not without significance that the voluminous accounts of the Delphian sanctuary and state make practically no use of numeral signs.<sup>2</sup>

(b) The absence at Athens of any era from which dates were reckoned means that the official indication of any given year does not involve the use of numbers.

(c) The fact that acrophonic numerals were never used as ordinals precluded their employment in indicating the day of a month or of a prytany or the serial number of a prytany. Thus when alphabetic numerals came into use, the Athenians had been accustomed for centuries to date-formulae written out wholly in words.

(d) In the Imperial period there is, for various reasons, an almost complete absence of certain classes of long and detailed documents which in the classical and Hellenistic periods had contained an immense mass of acrophonic symbols—quota- and assessment-lists, building accounts, inventories, navy-lists, subscription-lists, etc. The only considerable classes of long inscriptions are those which hardly call for any use of numerals, such as the lists of magistrates and other functionaries and, above all, the ephebe-lists.

(e) The custom of omitting from the prose epitaphs of Athenian citizens any record of the age of the deceased, together with the influence exercised by this custom over the prose epitaphs of non-citizens buried in Attica, is responsible for the rare occurrence of numerals in what is by far the largest class of inscriptions.

*The nature of the system.*—The numeral system under consideration is based on an alphabet of twenty-seven letters, divided into three groups of nine. The first nine letters represent the units from 1 to 9, the following nine the tens from 10 to 90, the remaining nine the hundreds from 100 to 900. Thus any given number lower than a thousand is represented by not more than three signs, indicating the numbers of hundreds, tens and units composing it. But neither the Ionian alphabet nor any other employed in the Greek world contained as many as twenty-seven letters, and that number had to be secured by taking the Ionian alphabet of twenty-four letters and adding three more, (a) that which we usually call 'digamma,' occupying the sixth place, between  $\alpha$  and  $\beta$ , the place which it held in the Phoenician alphabet from which the Greek was derived, (b) 'qoppa,' standing immediately before  $\rho$  (as our Q stands before R), as it did in the Phoenician alphabet, and (c) a letter which we call 'sampi,' probably the representative of the Phoenician 'ssade,' which stood between 'pe' and 'qoph,' but was abandoned by the Greeks because

<sup>2</sup> See my comments in *BSA XXXVII*, 246 f., *Ann. Chron.* 1945, 114 f.

they were otherwise sufficiently provided with sibilants. Possibly the original position of this letter in the alphabet was unknown to the inventor of the alphabetic numerals, who placed it after  $\equiv$  and so gave it the value 900. We thus have in Attica, and indeed throughout the Greek world, the following table of letter-values:

$\alpha = 1$	$\iota = 10$	$\rho = 100$
$\beta = 2$	$\kappa = 20$	$\sigma = 200$
$\gamma = 3$	$\lambda = 30$	$\tau = 300$
$\delta = 4$	$\mu = 40$	$\upsilon = 400$
$\epsilon = 5$	$\nu = 50$	$\phi = 500$
$\zeta = 6$	$\xi = 60$	$\chi = 600$
$\eta = 7$	$\omicron = 70$	$\psi = 700$
$\theta = 8$	$\pi = 80$	$\omega = 800$
$\vartheta = 9$	$\varphi = 90$	$\Upsilon = 900$

In numbers from 1000 to 9999 the thousands, placed first in order, are represented by the same signs as the units, but their value is normally indicated by the addition to the letter of some mark of differentiation, most frequently a slanting stroke prefixed to the numeral; thus the number 1754 is written as  $\Upsilon\text{A}\Upsilon\text{N}\Delta$ . But 10,000, 20,000 and higher multiples of 10,000 are never represented by  $\Upsilon$ ,  $\text{K}$ , etc.; instead the alphabetic system calls to its aid an acrophonic element,  $\text{M}$ , standing for  $\mu\upsilon\pi\acute{\iota}\alpha\varsigma$  or  $\mu\acute{\upsilon}\pi\iota\omicron\iota$ . In order to avoid confusion with  $\text{M} = 40$ , the single myriad may take the form of a monogram of  $\text{MY}$ , or it may have a small  $\text{A}$  placed immediately above it, denoting  $\mu\acute{\iota}\alpha \mu\upsilon\pi\acute{\iota}\alpha\varsigma$ . Multiples of a myriad are similarly represented by  $\text{M}$  with small letters superposed, showing the number of myriads represented; e.g.  $\overset{\text{B}}{\text{M}} = 20,000$ ,  $\overset{\text{A}}{\text{M}} = 1,000,000$ .

In Attic inscriptions of the Roman period large numbers rarely occur, and, where they do, they are usually written out in words, e.g. 3697, 3698 (before A.D. 250)  $\mu\upsilon\pi\acute{\iota}\alpha\varsigma\iota \pi\acute{\epsilon}\nu\tau\epsilon \kappa\alpha\iota \epsilon\acute{\iota}\kappa\omicron\sigma\iota$ , 1088.28 (A.D. 131-8)  $\mu\upsilon\pi\acute{\iota}\alpha\delta\omicron\varsigma \epsilon\acute{\iota}\kappa\omicron\sigma\iota\upsilon$ , 13211  $\mu\upsilon\pi\acute{\iota}\alpha\delta\omicron\varsigma \pi\acute{\epsilon}\nu\tau\epsilon \acute{\alpha}\rho\gamma\upsilon\pi\iota\omicron\upsilon$ . I have only found one unquestionable example of a number above 10,000 expressed in alphabetic numerals, *Hesp.*, III, 42,  $\overset{\text{A}}{\text{M}}\text{BT}$ , which must stand for 12,300.<sup>2</sup> True, in 2878 (early i A.D.) the symbols  $\overset{\text{B}}{\text{M}} \overset{\text{A}}{\text{M}} \overset{\text{C}}{\text{M}}$ , engraved below three orifices giving access to a trough of Hymettian marble, are interpreted as 20,000, 10,000 and 5000 respectively; but this suggestion of F. Hiller von Gaertringen, adopted by Kirchner, I

<sup>2</sup> The inscription in question is a fragment of an Imperial letter, dating from the late second or early third century A.D.; by his transcription  $\text{M}\alpha\cdot\text{B}\tau\cdot$  the editor disguises the true nature of the numeral complex.

find it impossible to accept. A. Wilhelm, in his *editio princeps* of the inscription, admitted that he could not solve the riddle of the meaning of the three signs, adding that 'one thing only is certain, that B means 2, A 1 and < a half' (*Beiträge zur griechischen Inschriftenkunde*, 83); to me it seems more than probable that in this dedication of Athenian *δασυνόμοι* M denotes μ(έδιμος) or μ(ετητής).

*The order of the numerals.*—The numeral signs used to represent any given number are normally arranged, as was invariably the case with acrophonic numerals, in the descending order of value, e.g. ρια' = 111. This rule is, I believe, everywhere and always observed in numbers exceeding 1000, though in some parts of the Greek world examples of a reversed or mixed order in the representation of numbers below 1000 are very common. In Attica on the other hand deviations from the general rule are rarely found; I have noted only the following instances:—<sup>4</sup>

1367.4, 6, 7, 18, 21, 23 (late i A.D.?) γι', ζι', ηι', θι', θι', α' (indicating days of various months),<sup>5</sup>

1765.3 (A.D. 138-9) ει' (sc. έτος),

2067.104 (A.D. 154-5) έτος θι',

2130.8 (A.D. 192-3) τδ θι',

2245.36 (A.D. 262-7) έτ(ο)ς ηι'.

Further, in 10683 Kirchner writes ϩ|τη εξ' and in 13011 έτων εξ', regarding these two numbers as representing 65, but I have no hesitation in reading εξ in both cases; in the former the complete phrase is [εξησε ϩ|τη εξ, μήνας (sic) θ', ημέρας δεκατρις (not δεκατρις, as in IG), showing that on any interpretation we have numeral signs and words written side by side.<sup>6</sup> L. Robert, it must be noted, has shown that 10683 belongs not to Attica, but to Thessalonica (*Rev. Phil.* XVIII, 44).

*The uses of alphabetic numerals.*—One marked difference between the acrophonic and the alphabetic numeral system lies in the far wider variety of purpose served by the latter. Acrophonic symbols are used only to denote cardinal numbers and units of value, weight or measure, e.g. T = τόλαντον,

<sup>4</sup> In a recent note (*AJPLXIX*, 419) J. A. Notopoulos cites all these examples except 1765; he does not call attention to the fact that they all indicate numbers between thirteen and nineteen, and the use of the phrase 'cardinal numbers' four times in the course of his brief note conceals the fact, which may well be significant, that all the numbers in question are not cardinal, but ordinal. It may be remarked that in English prose usage also the descending order is followed except for the numbers 13 to 19, where the unit precedes the 'teen' (i.e. 'ten') in speech. In German, on the other hand, the unit is pronounced

before the ten in any combination of the two except 11 and 12.

<sup>5</sup> As I point out below (p. 132), it is not certain that the six examples afforded by 1367 are really relevant.

<sup>6</sup> This use of numerals and words side by side may be illustrated by 980. 17 έτα και ϩ', 2499.4 έτα και ϩ': HH: δραχμών, 2500.4: HH: εκατόν [84 δραχμών], 3199.10 ϩ. άλεχ Ν(ηραι) έκατα|δωκον ε'. Kirchner's comment on this last passage, 'όγδοις θημύνας, χώματα Ηεγυρί', is surprising, for the phrase clearly means 'weight: nine pounds, 5 ounces', and όγδοις is a recognized variant of άγδοις (LS<sup>9</sup>, s.v. άγυζα).

Σ = στατήρ or στάδιον, ■ = μυᾶ, etc. Alphabetic numerals; on the other hand, are used for the following purposes:—

(1) To indicate cardinal numbers, e.g. 7858 ἐτῶν ιζ', ἡμερῶν κγ'; '17 years, 23 days.' This primary use requires but little comment. It is especially frequent in these contexts:—

(a) In the phrases ἡ βουλὴ τῶν Χ (= 600), ἡ βουλὴ τῶν Θ (= 500) and ἡ βουλὴ τῶν ΨΝ (= 750), which are, however, very often written out in full, ἡ βουλὴ τῶν ἑξακοσίων, etc.<sup>7</sup> Of the first we have examples from the reign of Augustus and his successors down to Hadrian.<sup>8</sup> In or about A.D. 128–9 Hadrian reduced the number of the Athenian Council to five hundred, and ἡ βουλὴ τῶν Θ occurs frequently<sup>9</sup> from that year onwards down to about the middle of the third century (1077.10, 1078.38, 1817, [*Hesp.* XII, 84, X, 261], 3680, 3683, 4088, 3815). Of an increase in the membership to 750 the sole evidence is the phrase ἡ βουλὴ τῶν ψν' (3669, of ca. A.D. 269–70). In the fourth century we find the phrase ἡ βουλὴ τῶν τριακοσίων (3716.3, 4222.6); I have not come across ἡ βουλὴ τῶν Τ.

(b) In phrases indicating length of time, reckoned in years, months and/or days, e.g. 13226 ἐξησεν. ἐτη | 3' | μῆν. θ'. ἡμ. κη', 10683 (see above, p. 129), 11473, 12915, 7858 (quoted above). Such phrases, usually confined to recording numbers of years, are most frequently found in epitaphs,<sup>10</sup> but they are much less common than might have been expected because it was not customary for Athenian citizens to have their age recorded in prose epitaphs, and in this respect the great majority of epitaphs of aliens buried in Attica conformed to Attic usage.<sup>11</sup> In metrical epitaphs, on the other hand, the age of the dead is often more or less precisely recorded, especially to add pathos in the case of those who died in childhood or on the threshold of manhood or womanhood, or to call attention to the long span of years covered by the deceased.<sup>12</sup> A curious phenomenon is the sporadic appearance of numerals even in metrical

<sup>7</sup> In some decrees the number is in apposition with the word βουλὴ, e.g. 466.45 (307–6 B.C.) [τὴν βουλὴν τοὺς] [α], 687.52 f. (266 B.C.) [τὴν βουλὴν τοὺς] [β] [H]. 847.26 (ca. 214 B.C.) τὰ βουλὰ τοὺς ἑξακοσίοις καὶ πεντήκοντα, 1013.7 (late 2d c.) ἡ βουλὴ ■ ἑξακόσιοι, 16 τὴν βουλὴν τοὺς ἑξακοσίοις.

<sup>8</sup> Examples are 1069.5 (late 1 B.C.), 4126 (not before 14 B.C.), [3247] (before A.D. 4), 2803, [4166], [3266] (A.D. 37–41), 3449 (ca. A.D. 50), 3277 (A.D. 61–2), [4188] (A.D. 64), [3788], 3907. If 4244 is rightly dated in 1 A.D., we must restore [ἡ βουλὴ τῶν Χ]; the assignment of 3664 to 'fin. s. II/init. s. III p.' based on prosopographical evidence (cf. A. Wilhelm, *Beiträge*, 95 f.), is incompatible with the appearance in it of ἡ βουλὴ τῶν Χ.

<sup>9</sup> Examples are [1101.5], 1102.8, 3579, 3735–6, 3960–3, 3964 (Add. p. 351), 4062, 4270.14, 4211, [3311], [3391], *Hesp.* X, 242, XVI, 174–5.

<sup>10</sup> Besides the inscriptions already cited I note the following prose epitaphs: 7463, 7580, 7882, 9583, 9898, 9906, 10007, 10010, 103474, 10770, 10964, 12409, 12595 (cf. J.H. Oliver, *Hesp.* XI, 90), 13011; the age of the dead is recorded in words in prose epitaphs 6153, 6636, 6797, 83582, 11474, 12825, 13178.

<sup>11</sup> Of the relevant epitaphs only 6153 and 6797 are those of 'citizens,' aged two and five years respectively. Unique is the case of Dexileos, whose years of birth and death are indicated by the names of the eponymous archons (6217).

<sup>12</sup> Examples of childhood, 12629 (6 months), 106992 (15 months), 12960 (5 years), 12628, 105782 (6 years; for ἔτη we must read ἔτη), 12516, 12599, 11674 (7 years); of young manhood, 13132 (16 years), 12393, 190092 (19 years), 7447, 9713, 11267, 11491 (20 years); old age, 13098 (70 years), 13150 (82 years), 13137 (90 years).

epitaphs, 12701 ἐπτά τε καὶ κ', 13151 (= *Hesp.* VII, 474) τήσας μζ' καλῶ[ς ἐνιαυτοῦς], 13165 κζ' ἔτα. Numerals are also used to indicate the length of military service (13182 [ἐ]στρατεύσατο ἔτη ιγ') or of the tenure of some office—*gymnasiarchia* (2086.10-27; cf. Add. p. 816) or priesthood (3620.17 of A.D. 177-80 [λ]ειτουργήσαντα τοῖν θεοῖν ἔτασι υφ', 1368.5-7 ἀνθ[ε]ρασαμένου ἔτη ιζ' καὶ ἑρασαμένου ἔτη ιγ', 2243.62).

(c) Alphabetic numerals are also used to denote money-values. Nine examples occur in 1368, the revised regulations of the Society of Iobacchi adopted shortly before A.D. 178; in five the numeral is preceded by \* (ll. 38, 40, 55, 90, 161), in four by δρ. (ll. 80, 82, 99, 110), the sums indicated being 50 in three cases, 25 in four, 30 and 5 each in one.<sup>13</sup> A νόμος ἐρασιστῶν, probably of the late second century A.D., mulcts a disorderly member in Ἀττ[ι]καῖς κε' (1369.43). The symbol \* certainly denotes denarius in 2776, of Hadrian's reign, where every numeral complex is (or was) preceded by \*, while in a large number of cases the denarii are succeeded by the letters ΔΡ (= δραχμαί) in ligature or monogram followed by the number of drachmas and obols.<sup>14</sup> It is curious that in this inscription, whereas the sum of three drachmas is always represented as a half-denarius,  $\mathcal{L}$  3½ appears as ΔΡΤΣ-, 4½ as ΔΡΔΣ, 5½ by ΔΡΕ-. We also find \* followed by numerals in an ephebic list of A.D. 217-8 (2221.76), and in a will of about A.D. 240 (2773.13, 15, where the δ of l. 15 points to δηνάρια as the meaning of \*); in three tomb-inscriptions it indicates the fine payable for grave-violation (13212, 13217, 13221), but L. Robert has pointed out that these are non-Attic (*Rev. Phil.* XVIII, 39 f., 48; for 13212 see also J. H. Oliver, *Hesp.* XI, 90). In an ephebe-list of A.D. 192-3 the variant form X occurs (2130.40, 44). Of especial interest are 2336 and 2337. Of the former, a long subscription-list for the cult of Pythian Apollo, a revised and greatly improved edition has been published in *Harvard Studies* LI, 111 ff., by Sterling Dow. The sums contributed, expressed by acrophonic numerals, are 250, 200, 100 or 50 drachmas, and the inscription has been engraved by a number of hands, which Dow carefully distinguishes. His 'Hand H' wrote N in ll. 136 (101-0 B.C.) and 246 (97-6 B.C.), and this must almost certainly be regarded as the alphabetic sign for 50 rather than as an error for H = 100; hence in ll. 221, 223 (98-7 B.C.), engraved by the same hand, Dow tentatively restores the lost sum as [P?]. In 2337, dated at the beginning of the Imperial period, we have another list of donations made by women εἰς τὴν οἰκο[δομίαν] τοῦ ἱεροῦ; fourteen are denoted by l and one by Γ, which must be understood as representing 10 and 3 drachmas respectively.

<sup>13</sup> I cannot believe that in this inscription \* denotes denarii and δρ. drachmas; \* must here, I think, as in many places outside Attica, represent the drachma, in spite of the evidence of 2776.

<sup>14</sup> In l. 135 I am puzzled by the final  $\mathcal{L}$ , which elsewhere in this inscription denotes a half-denarius, not a half-drachma. In l. 153 the restoration [\*ΤΣ-] takes a form not found elsewhere.



(d) Numerals on milestones (5181-2, 5202-4; cf. 5192) indicate distances 'from Town' (ἐξ ἄστεως).

(2) To indicate ordinal numbers, i.e. numeral adjectives. This very important extension of the use of numeral signs, unknown in the acrophonic system, constituted one of the chief advantages of the alphabetic system and no doubt helped to secure its universal adoption, despite Athenian conservatism; it means that, in place of εικοστοῦ ἑβδόμου ἔτους (2065.4), ἔτους κζ' (or, in Egypt, L κζ') can be written, a gain both in brevity and in convenience. Attention may be drawn to some special uses of these ordinals.

(a) To indicate the day of the month. As early as 111/o B.C. we find [μηνὸς Πα]νδάμω κη' (1135.5), but this occurs in the text of a treaty between the Cretan cities of Lyttus and Olus, and cannot be regarded as an example of Attic usage. In the sacrificial calendar 1367, dubiously dated towards the close of the first century A.D., we have frequent references to days of Attic months, Βοηδρομιῶνος γι', ζι', η', Πυανοσιῶνος ζ', Ποσειδεῶνος η' ἰσταμένον, θι', Γαμηλιῶνος θι', Ἐλαφηβολιῶνος α', Μουνιχιῶνος β' ἀπίοντος (see above, p. 129), but I am tempted to ask whether γι', ζι', etc. may not represent γ' ἰσταμένου, ζ' ἰσταμένου, etc., especially in view of the appearance in l. 3 of ιθ' (which I do not understand), of the insertion of ἰσταμένου in l. 16, and of the fact that the document probably registers the private offerings of some society which may have been influenced by the use of I for ἰσταμένου elsewhere in the Greek world. In 1368.3 we have Ἐλαφηβολιῶνος η' ἰσταμένου. In a decree of A.D. 209-10 we find the double designation κγ' τῆς πρυτανίας, μηνὸς Ποσειδεῶνος τῆς λ' (1077.4 f.).<sup>15</sup> In an Imperial *constitutio* of A.D. 305-6 we have τ[ῆν] πρὸ ιγ' καλ. Ὀκτωβρίων (1121.16; cf. 1076.14, 24), but here the numeral may perhaps be a cardinal, as is shown by 4842 (of A.D. 386-7) πρὸ εἰς καλ. Ἰουνίων.

(b) In a number of prytaneis-inscriptions, ranging from ca. A.D. 132-3 to the early part of the third century, the order of the prytany in the year's succession is indicated by a numeral, followed (or, more rarely, preceded) by the word πρυτανείας;<sup>16</sup> examples occur of all numbers from α' to ιβ' with the exception of δ', θ', and ι'.

(c) More frequent is the use of numerals in phrases denoting years, though even here their frequency is greatly reduced by the Athenian custom, involving considerable inconvenience, of indicating a year by the name of an eponymous archon and not by reference to an accepted era. We have a group, ranging from A.D. 126-7 to 160-1, of references to Hadrian's first visit to Athens; among them are 3190.5 ἔτ. τὸ γ' ἀπὸ τῆς Καίσαρος Ἀδριανοῦ |

<sup>15</sup> I do not understand the use here of the genitive τῆς in place of the normal dative.

<sup>16</sup> Examples are 1763-5, 1773-6, 1778, 1794, 1818, 1821, 1834.

ἐπιδημίας (where ἐτος is understood after γ'), 1764.4 f. ιε' ἀπὸ τῆς α' τοῦ [θεοῦ Ἀδριανοῦ] εἰς τὴν Ἑλλάδα ἐπ[ι]δημίας, 1765.3 f. εἰ' ἀπὸ τῆς πρώτης θε[οῦ Ἀδριανοῦ] εἰς Ἀθήνας ἐπιδημίας, *Hesp.* XI, 49 λζ' ἀπὸ [τῆς τοῦ θεοῦ] Ἀδρια[ν]οῦ α' ἐπ[ι]δημίας.<sup>17</sup> More often the word ἐτος followed by a numeral serves in ephobic inscriptions to indicate the year of the exercise of a lifelong function. Thus we have numerous references to specific years in Abascantus' tenure, which lasted in all for thirty-four years, of the office of παιδοτρίβης διὰ βίου. The first (2044.4 παιδοτρίβουτος διὰ βίου τὸ δ') dates from A.D. 139-40, the last (2097.191 παιδοτρίβης διὰ βίου ἐτος λδ') from 169-70.<sup>18</sup> Such phrases recur in connexion with other παιδοτρίβαι διὰ βίου (2103.11, 2111.7, 2242.6, *Hesp.* XI, 71), and other officials attached to the ephobic organization in the third century A.D.—προστάτης (2235.7, 2245.33), διδάσκαλος (2239.9), γραμματεὺς (2242.10), ὀπλομάχος (2228.4) and ὑποζάκωρος (2245.36). Despite the absence of ἐτος, I have no hesitation in interpreting in the same way 2065.20 f. (A.D. 150-1) ὀπλο[μάχος Ἀν] τώνιος Οἰναῖος F', and *Hesp.* XI, 71, ll. 43 ff. (late iii A.D.) προστάτης Ζωσῆς δ', . . . ὀπλομάχος Νυμφόδοτος ε', . . . ὑποπαιδοτρίβης Αὐρ. Ἀλέξανδρος ε'.

(d) Other uses of ordinal numerals do not call for special treatment; they include phrases like [Πα]ναθηναῖς[ι] λζ' (2245.1 f., of A.D. 262-7; cf. 2241, [*Hesp.* X, 251]), [λεγώνος] δ' (4220.2 of iii A.D.; cf. [3646.5], *Hesp.* X, 245) and α' στάδιον, β' στάδιον, γ' στάδιον, κτλ. (2115, of A.D. 180-92) or α' τάξις (2119, of A.D. 180-92; cf. 3758.4).

(g) A simple numeral occasionally represents a numeral adverb, e.g. δ' = τετράκις. Thus in 3592.10 (A.D. 165-9) στρατηγήσαντος ἐπὶ τὰ ὅπλα γ' means that the office had been held three times, while in two third-century inscriptions (3169, 3769) the numbers of victories won at the several festivals by the herald and the charioteer commemorated are similarly denoted, e.g. 3169.10 f. Ὀλύμπια ἐν Πείσει β', Πύθια ἐν Δελφοῖς β', Νέμεια ἐν Ἀργεῖ γ', Ἴσθμια δ'. More often, however, numeral adverbs are written out in full, e.g. 3504.5 ff. (late i B.C.) σιτωνήσαντα | δις καὶ στρατηγὸν ἐπὶ τοὺς | ὀπλείτας γενόμενον τετράκις, 3531 (before A.D. 50) [γυ]μνασιαρχήσαντα δις, . . . [στρατηγήσαντα] [ἐπὶ τοῖς] ὀπλείτας δις, 4780 (A.D. 173) δις ὑπατος.

(4) A numeral preceded by τὸ frequently serves to indicate the repeated tenure of some office or title, e.g. στρατηγὸς τὸ δ' = 'general for the fourth time.' The earliest examples I have noted are 3266.11 (A.D. 37-41) [τοῦ ἐπὶ] τοὺς ὀπλείτας στ[ρατηγοῦ] τὸ [.], 1969.4 (A.D. 45-6) [παιδοτρίβουτος τὸ γ' Διοσίμου, 3273.5 (A.D. 49-53) στρατηγοῦντος ἐπὶ τοὺς ὀπλείτας τὸ δ', 3535.6 (ca. A.D. 57) τὸν ἐπὶ τοὺς ὀπλείτας στρατηγὸν τὸ δ', and 3182.2 (A.D. 66)

<sup>17</sup> Cf. also 3733.5 τρίτου, 2040 πῆλ[αρ] τω, 1762 τὸ ὄγδον, 1764.61, 2065.4 f. εἰκοστού ἑβδόμου ἔτους κτλ.

<sup>18</sup> Cf. 2055.22, 2057.8, 2067.104, 2068.6a, 2079.5, 2085.7, 2086.116, 2097.191, 3012.6, 3740.8.

στρατηγοῦντος ἐπὶ τοὺς ὀπλείτας τὸ 3', but the most frequent appearances of this phenomenon are in the official titulature of Roman Emperors from Hadrian onwards, e.g. 1101.3 (A.D. 128-9; '128/27' in *IG* is a misprint), 1102.6 (A.D. 131-2), 1105A.<sup>19</sup> That the numbers in all such cases must be regarded as ordinal, not cardinal, is proved by the many examples in which this phrase is written as τὸ δεύτερον, τὸ τρίτον, etc. This use occurs in documents of the third (4675.5 ἐπ[ι] 1[ε]ρ[έως] τὸ πέννιτον, 1304.18 χειροτ[ον]ηθεὶς τὸ δεύτερον) and first (4991.5 [ἐπὶ] Μηδείου τὸ δεύτερον, *Hesp.* Suppl. I, nos. 98.32, 110.20 (a revised edition of *IG* II<sup>2</sup>, 2467), 116.6, 16, 79, *IG* II<sup>2</sup>, 2998.7, 17, *Hesp.* XVII, 41) centuries B.C. and becomes very common in the first century A.D.,<sup>20</sup> after which it appears sporadically, the latest examples I have noted being 1121.17 (A.D. 305-6) and 13236.

(5) When throughout several generations father and son bear the same name, a numeral is sometimes added to indicate the identity of the person named. This phenomenon, common elsewhere, is very rare at Athens, but 4441.8 (ii A.D.) Φίρμος 3 γ' seems to be an example of it. The numeral here represents an adverb, as is clear from the frequent use outside Attica of δὲ, τρίς, τετράκις in place of β', γ', δ'. In Attica the father's name alone is normally taken into account, and where this is the same as that of the son the homonymity is indicated by the symbol 3; thus Στέφανος 3 = Στέφανος Στεφάνου.

(6) Alphabetic numerals also serve in some places for the representation of fractions, but of this use I have found no trace in Attic inscriptions. In 2776 the symbol £ is used for the half-denarius, S for the half-drachma and 3 for the half-obol; other fractions of the denarius are indicated by the appropriate number of drachmas and obols,  $\frac{1}{2}$ -denarius by S-3,  $\frac{1}{4}$ -denarius by ΔP AS,  $\frac{3}{4}$ -denarius, by ΔP ΔS.<sup>21</sup>

*The forms of the numerals.*—Letters used as numerals are identical in form with those used in the spelling of words, and they vary therefore according to the 'fount of type' employed throughout the inscription in which they occur. They may thus be either simple or ornamented by serifs or *apices*, rectilinear or curved, 'monumental' or cursive, and there is among them the same wide variety of form which we find in the epigraphical script generally. But of the twenty-seven signs in question three were no longer in use for any other purpose by the time when we first meet them as numerals, and to their forms

<sup>19</sup> Other examples, in chronological order, are 1764.8, 3390\*, 1108.14\*, 1109.3\*, 2351.60, 3687.13, 24, 5210\*, *Hesp.* XI, 71, of which those asterisked occur in Imperial titles. A doubtful example is 3269\* (A.D. 41), where Graindor restored [ὅμων] ἀποδεδυγ[έν]τον τὸ δεύτερον, but Kirchner, for reasons of space, substituted τὸ β'; elsewhere in the titulature of Claudius (3268.5, 3271.2, 3272.3) the word δεύτερον

is written in full.

<sup>20</sup> Examples, in chronological order, are 3274.5, 1969.4, 1945.3, 1970.5, 3542, 1990.3, 3277.4, 3539, 2883, and perhaps 3501. See also the preceding note. In 2827.6 and 2318.202, 317 πρῶτον, without τὸ, is used as meaning 'for the first time.'

<sup>21</sup> For a full discussion of this inscription see J. Day, *Economic History of Athens*, 221 ff.

attention may be called. Their determination is not altogether an easy task, for of the great majority of the relevant inscriptions no photographs or facsimiles are available and typography fails to reproduce satisfactorily the multiplicity of forms used by the ancient engravers. Moreover, the *editio minor* of *IG* II and III, the basis of the present study, does not attempt to reproduce the letter-forms of the original texts, but gives for the most part a transcript in ordinary type, though in many instances it does offer a typographical approximation to the signs used for numerals and for punctuation-marks. Where possible, therefore, I have used the plates in P. Graindor's *Album d'inscriptions attiques* and A. Conze's *Die attischen Grabreliefs* and the excellent photographic illustrations which accompany nearly all of the inscriptions edited in *Hesperia*.

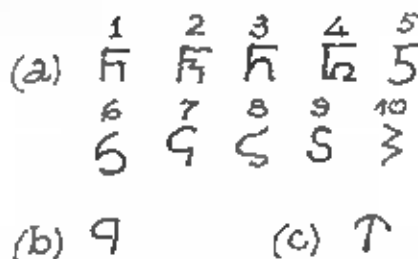


FIG. 1.—FORMS OF 6, 90 AND 900.

(a) 'Digamma,' representing 6, occurs frequently in the forms shown in fig. 1 (a). It is noteworthy that the early form of the letter F, does not appear as a numeral in Attica and very rarely elsewhere, and that the Athenians did not use the form  $\epsilon$ , very common elsewhere, except in *IG* I 2 760, though forms 5 to 8 in fig. 1 are cursive developments of it. Form 9 occurs at the foot of a Latin milestone-inscription of A.D. 395-408, but is almost certainly a Greek numeral, while form 10 is found only in an inscription of uncertain date, consisting of the letters A to  $\Theta$  inclusive of digamma, on which Kirchner comments '*C exhibet numerorum 1-9 exercitium ludendi causa insculptum*'; the form, a reversed  $\xi$ , is unparalleled elsewhere, and, though Kirchner gives it without question, the first editor, E. Hula, saw only = (*O*  $\eta$  I, 30). In a footnote I add references to the inscriptions known to me which show the several forms.<sup>22</sup>

(b) *Qoppa*, standing for 90, I have found only in 2776.38, 56, 109 (A.D. 117-38) in a form used throughout the Greek world, FIG. 1 (b).

<sup>22</sup> (1) 1102.6 (A.D. 131-2), 5204.7 (not before Commodus), 2773.13 (ca. A.D. 240).—(2) 10964.—(3) 9898.—(4) 1764.7 (A.D. 138-9).—(5) 2776.54 98, 107, 109, 113 (A.D. 117-38), 1765.5 (A.D. 138-9).—

(6) 2085.7 (A.D. 161-2), 13226.—(7) 3620.17 (A.D. 177-80).—(8) 2243.62 (after A.D. 243).—(9) 5204.20 (A.D. 395-408).—(10) 3229 G.

(c) 'Sampi,'<sup>23</sup> 900, occurs only in 2776.11, 87, 113, 136, in the form shown in FIG. 1 (c).

*Distinction of numeral signs.*—Since with us the numeral signs (with the exception of 0 and 1, which are identical with, or at least closely resemble, the letters O and I) are wholly different in form from letters, and numeral groups are always separated from the adjacent words by blank spaces, there is no danger of confusion between words and numbers. But where, as in Greek inscriptions, alphabetic numerals are indistinguishable in form from letters used in the formation of words, and texts normally run on continuously, the convenience of the reader suggests, or even demands, that some means be taken to call his attention to the special character of the letter-numerals. In the case of the acrophonic symbols this end was attained by leaving ■ blank space before or after or on both sides of the numerals, or by the insertion of a mark of punctuation, : or ;, before and/or after the symbols, which were thus isolated from the rest of the text. With alphabetic numerals the two- or three-dotted colon was not used, but, while in many cases no attempt is made to distinguish between letters and numerals, various devices were very frequently employed with this end in view.

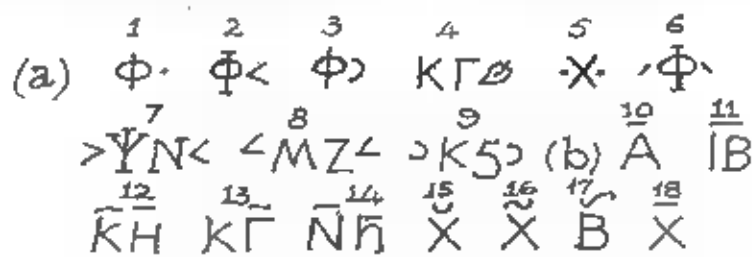


FIG. 2.—NUMERAL SIGNS IN THE INTERIOR OF A LINE.

(a) Blank spaces are often left before and after the numerals, though not after them if they end, or before them if they begin, a line.

(b) Various punctuation-marks are placed on one or both sides of the numerals (usually with the same exceptions as in the preceding clause); these are illustrated in FIGS. 2 (a), 3.

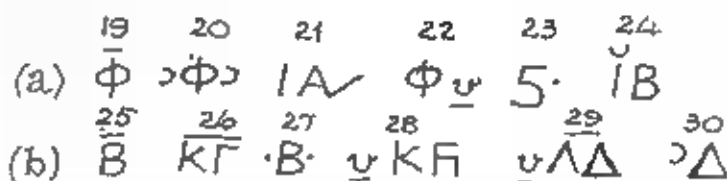


FIG. 3.—NUMERAL SIGNS: (a) AT THE BEGINNING, (b) AT THE END OF A LINE.  
(v REPRESENTS A BLANK SPACE.)

<sup>23</sup> For this letter see F. W. G. Foat, *JHS* XXV, 338 ff.

(c) Diacritical signs are often placed above (rarely above and below) some or all of the letters composing a numeral complex: see FIGS. 2 (b), 3.

(d) Two of these means were sometimes employed simultaneously, as shown in FIG. 4 (a).

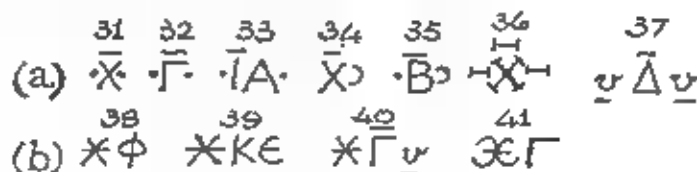


FIG. 4.—NUMERAL SIGNS AND MONEY VALUES.

(e) The symbol of the denarius (or drachma) before a numeral sufficiently isolates it from the context and renders unnecessary further diacritical signs,<sup>24</sup> though occasionally a horizontal stroke is placed above the numeral; see FIG. 4 (b).

In a footnote<sup>25</sup> I give references to epigraphical examples of the various devices shown in FIGS. 2-4; the dates, added in brackets, are in all cases A.D.

*Historical summary.*—It is commonly, but erroneously, believed that the alphabetic numeral system was a creation of the Alexandrine age.<sup>26</sup> Whatever answers we may give to the questions (which I must not here stop to discuss) of the original home of the system, the date of its invention and the earliest extant example of its application, we must allow that some Athenians at least knew of its existence and understood its use in the fifth century B.C. For in *IG I<sup>2</sup>*, 760 we have an inscription from the Acropolis, dating, to judge by the letter-forms, from the Periclean period, which, whatever may be its true explanation, admittedly exemplifies the use of alphabetic numerals. It might be thought that the three fifth-century boundary-stones inscribed

<sup>24</sup> On 13212 (ii A.D.) Kirchner comments '✱BΦ = γλυκόμενα 2500 δραχμα'. But the slanting stroke is the usual sign indicating thousands, not the symbol, common in papyri, for γλυκόμενα. This inscription however, is not Attic, but Perinthian (L. Robert, *Rev. Phil.* XVIII, 40).

<sup>25</sup> (1) 3638 (after 150).—(2) 3678.5 (ii-iii).—(3) 4210.14 (after 128-9).—(4) 2079.5 (158-9).—(5) 1072.10 (116).—(6) 3616 (late ii).—(7) 3669 (ca. 269-70).—(8) 13151 = *Hesp.* VII, 474.—(9) 2085.7 (161-2).—(10) 1778.3 (169-70).—(11) 1805.2 (190-200).—(12) 2086.116 (169-4).—(13) 1077.4 (209-10; as in *IG III*, 10).—(14) 3620.17 (177-80).—(15) 4060 (before 128-9).—(16) 3287.4 4 (124-5).—(17) *Hesp.* XI, 71 = II, 507.—(18) 3449 (after 48).—(19) 3801 (mid ii).—(20) *Hesp.* XVI, 174.—(21) *Hesp.* X, 245.—(22) 1078.38 (ca. 220).—(23) 13226.—(24)

1834.12 (iii).—(25) 1774.6 (167-8).—(26) 3012.6 (158-9).—(27) 2361.60 (early iii).—(28) 9898 (end of ii).—(29) 2097.191 (169-70).—(30) 9906 (i-ii).—(31) 3284.4 (113).—(32) *Hesp.* II, 167 (179-80).—(33) 1769.6 (ca. 132-3).—(34) 3287 C4 (124-5).—(35) *Hesp.* II, 167 (179-80).—(36) 3931 (i).—(37) 3535.6 (ca. 57, as in *IG III*, 652).—(38) 13217 (ii-iii).—(39) 1368.40 (before 178).—(40) 2773.15 (ca. 240).—(41) 2130.40 (192-31). As the purpose of FIG. 2 is to illustrate the means used to distinguish numerals as such, the forms of the letters there shown are not in all cases absolutely exact.

<sup>26</sup> See, e.g. Meisterhans-Schwyzler, *Grammatik der attischen Inschriften*, II, 'Das in alexandrinischer Zeit erfundene, ursprünglich, wie es scheint, nur für Ordinalzahlen berechnete 27-ziffrige System begegnet in Athen erst seit der Kaiserzeit und zwar bei Kardinal- wie bei Ordinalzahlen.'

ῥορς = (IG I<sup>2</sup>, 876) afford fresh examples of the same use, but this I gravely doubt.<sup>27</sup>

In 403 B.C. the Athenians passed a decree, on the motion of Archinus, adopting the Ionian letters in place of the local Attic alphabet hitherto used, with few exceptions, for all public purposes. But they did not at that time make any change in their acrophonic numeral system, to which they clung with remarkable tenacity long after the Greek world had become familiarized, if only through the medium of the Seleucid and Ptolemaic coinages, with the greater convenience of the alphabetic system. Whether there was a formal act whereby this system was officially recognized and adopted we cannot say; we have no record of any such decree. What the inscriptions prove is the continued and constant use of acrophonic numerals down to the opening years of the first century B.C., with one or two sporadic examples later,<sup>28</sup> while, as we have seen (p. 132), alphabetic numerals occur in a Cretan document of 111-0 B.C. engraved at Athens (1135.5) and also in subscription-lists of 101-0 and 97-6 B.C., appearing, perhaps accidentally, among numerous acrophonic signs. Few inscriptions containing numerals can be assigned to the first century B.C., but in the following century they become more frequent, and in the reigns of Hadrian, whose interest and munificence brought to Athens a new era of prosperity, and his successors down to the middle of the third century examples are very numerous. Thereafter, with the renewed decline of Athens, epigraphical records become progressively rarer and evidence for its numeral notation almost ceases, but there is every reason to believe that the system remained unchanged throughout the Byzantine period until the adoption of the Arabic numerals.

*Some minor problems.*—In conclusion I call attention to a few minor problems in the hope that others may be more successful than I in solving them.—In 1092B 21 I suspect that for  $\delta\eta\nu\alpha\rho\iota\varphi$  ι' we should read  $\delta\eta\nu\alpha\rho\iota\omega$ , and that the horizontal stroke over the final ι is an error of the engraver or the copyist: true, in I. 17 we have  $\tau\phi$   $\tau\alpha\rho[\epsilon\iota]\varphi$ , but the *iota mutum* is written in  $\sigma\upsilon\nu[\epsilon]\delta\rho\iota\omega$  in A2.—In 2221.22 I do not understand the two symbols following  $\mu\acute{o}\nu\varphi$  and preceding an ivy-leaf.—In 2302.4 I take  $\text{—}\Lambda\Phi$  as indicating 1500, but do not understand the reference.—In 3740.12 the significance of  $\Delta$  escapes me; I am uncertain whether to regard it as a numeral or not.—In 3769.24 Kirchner speaks of l. 24 as '*nota numeralis obscura*'; there seem to be two numerals with

<sup>27</sup> It may be an early example of the custom, abundantly attested in the fourth and following centuries, of distinguishing individual members of a group of similar objects by the use of letters of the alphabet, which in such casts do not represent numerals, but distinctive 'labels'; but why three stones should bear the same label, I cannot explain. So we may perhaps

interpret 2515  $\delta\rho\alpha\varsigma$  α, and possibly 2543. See Meisterhans-Schwyzler, *op. cit.*, 10.

<sup>28</sup> BSA XVIII, 128 f. Of the inscriptions there cited IG II, 985 = II<sup>2</sup>, 2336, and AE 1884, 167 ff. = IG II<sup>2</sup>, 1035 (where it is dated early i B.C.). See also 1052.11 (after 50 B.C.) [ $\delta\rho\alpha\chi\mu\acute{o}\varsigma$  III, 2292.52 (ca. A.D. 40)  $\Delta\Delta\Gamma\Delta$ ].

horizontal bars above and below them, preceded by > and followed by < and an ivy-leaf.—In 4521a 3 f. (Add. p. 352) τῆς σεμνοτάτης βουλῆς Φ is unparalleled in the absence of τῶν. Is this due to an oversight on the part of the ancient engraver or of the modern copyist or editor?—In 7080a ἐμαρτύρισεν δὲ ὁ τῶν | κγ (with an ivy-leaf after τῶν) is puzzling. Ἐμαρτύρισεν is, I suppose, misspelt for ἐμαρτύρησεν, presumably in the Christian sense of the term (though Christian inscriptions are excluded from *IG II*<sup>2</sup>). At first I thought it must mean 'was one of the 23 martyrs,' but this would be expressed by εἰς rather than ὁ, and I prefer to think that ὁ τῶν has been erroneously written or read for ἐπῶν.—In 12595 ἐτη ͵Ξ is described by Kirchner as '*numeri negligenter incisi dubii*.' The solution, no doubt, is that given by J. H. Oliver, who reads ἐτη ͵ιγ (*Hesp* XI, 90).

MARCUS N. TOD.



# THE DEDICATION OF CALLIMACHUS (IG I<sup>2</sup> 609)

(PLATES IO-II)

Two inscriptions<sup>1</sup> commemorating the battle of Marathon and set up soon after 490 have come down to us. Both are epigrams and both have profited by recent discovery and research. The one, IG I<sup>2</sup> 763, has had its left-hand portion added by a fortunate find in the Agora,<sup>2</sup> giving the beginnings of four hexameters: the other, IG I<sup>2</sup> 609, an inscribed column<sup>3</sup> formerly carrying a statue, has now, as a result of recent study, been reunited with the dedication it once bore, a winged woman, a Nike, it is thought. The group is one of the more spectacular fruits of the long-sustained and still continuing attempt to reunite the scattered pieces of the 'Perserschutt'. The reasons for dealing again with this latter dedication are new readings offered as a result of an examination of the inscription in the Epigraphical Museum in Athens.<sup>4</sup>

IG I<sup>2</sup> 609 is an inscription on a column of Pentelic marble of an estimated diameter of 0.32 m., roughly picked all round except for two flutings cut to receive two lines of inscription running vertically downwards. The fillet between the two flutings, of a width of 0.005 m., shows that the column was Ionic (PLATES IO-II).

The text of the inscription was restored by Hiller in IG I<sup>2</sup> as follows:

- I [Καλλίμαχος μ' ἀν]έθηκεν Ἀφιδναῖος τάθναται: ἀν[γελον ἀθ]ανάτου, ὅι  
 Ὁ[λύμπια δόματ'] ἔχουσιν.  
 II [Καλλίμαχος πολέ]μαρχος Ἀθηναίων τὸν ἀγῶνα: τὸν Μέ[δου τε καὶ ἑ]λένον  
 δ[ριπε μέγιστον:] πασιβν Ἀθηναίων Μα[ραθῶνος ἀν] ἱερὸν ἐλασος].

The column as preserved consists of eight fragments,<sup>5</sup> four of which join into two pieces. Altogether, the position of five fragments relative to each other can be determined with certainty, because they either join or make up a

<sup>1</sup> Apart from the abbreviations approved for general use in BSA, I quote J. Geffcken, *Griechische Epigramme*, Hiller von Gartringen, *Historische Griechische Epigramme*, and M. N. Tod, *Greek Historical Inscriptions*, by their author's name only. References to Diehl are to the epigrams collected under the name of Simonides in volume II of *Anthologia Lyrica*. DAA stands for *Dedications from the Athenian Akropolis*, by Raubitschek and Jeffery. The figures following these titles indicate the number of the inscription or epigram.

<sup>2</sup> First published by Oliver, *Hesp* II (1933), 480 ff. For bibliography see Diehl II<sup>2</sup> p. 114/5, *Hesp* XIV (1945), 161, and SEG X no. 404.

<sup>3</sup> Convenient editions are Hiller 10, Tod 13, Kirchner, *Imagines* no. 17 (photograph), DAA 13.

<sup>4</sup> I am much indebted to Mr. M. Mitsos, the Director of the Epigraphical Museum, for his friendly help and cooperation. At various times I enjoyed the benefit of valuable advice and criticism from K. Dover, T. J. Dunbabin, J. M. Cook, Professor A. Raubitschek, Miss L. H. Jeffery, and Miss Daphne Hereward. Mr. M. N. Tod, Professors Sir John Beazley and H. T. Wade-Gery kindly read through drafts at an early stage. Miss Jeffery and A. Raubitschek very generously allowed me access to the proofs of their *Dedications from the Athenian Akropolis*.

<sup>5</sup> Listed as fragments c to h in DAA 13. Only six letters are allotted to the eight fragments, because d and e consist of two pieces each. I adopt the notation of DAA (see PLATE IO(e)).

consecutive text; two more pieces come certainly at the end of the inscription, although they do not indicate how wide a gap separates them from the rest. Finally, there is one floater (fragment *f*).

These fragments were found in the years between 1840 and 1888, in an area east of the Erechtheum and the Parthenon, and were published, for the most part, separately and without knowledge of their pertinence to each other. All of them, with the exception of fragment *c*, had found their way into the first edition of the *Corpus* and its supplements,<sup>6</sup> when in 1891 Lolling first assembled the eight pieces,<sup>7</sup> and arranged them in their relation to each other. His attempts, however, to form a coherent text were only moderately successful, although with brilliant intuition he connected the dedication with Callimachus, the polemarch of 490, the Athenian Commander-in-Chief at the battle of Marathon. He took his clue from the fragmentary πολέμαρχος and the demotic Ἀφιδναῖος.

His text was as follows:

[Καλλίμαχος μ' ἀν]έθηκεν Ἀφιδναῖο[5] τὰ θεναιαί  
 ἀν - - - - -  
 - - - ἀθ]ανάτου ὁ[ρανὸν εὐρύν] ἔχουσιν  
 [στεσάμενος πολέ]μαρχος Ἀθηναίου τὸν ἀγῶνα  
 τὸν με - - - -  
 - - - - ἐλεονο - - - -  
 πασις Ἀθηναίων μ - - - -

It might seem odd that he, who had seen so much, should have failed to connect the ἀγὼν mentioned in the inscription with the battle of Marathon. There can, however, be little doubt that he was deterred from making this

<sup>6</sup> Fragment *c*: IG I suppl. 91 no. 373/108, and IG I suppl. 131 no. 373/108 (found in north wall of the Acropolis. *DAA* is misleading on this point).

Fragment *f*: IG I suppl. 100 no. 373/199.

Fragment *g*: IG I suppl. 101 no. 373/213.

Fragment *h*: IG I suppl. 99 no. 373/195.

Fragment *c*: Kirchhoff (Lolling) *SB Berlin* 1888, 313 no. 1.

Fragment *d*: Pittakys, *AE* 1899, no. 335 and often, e.g. IG I 350 b. Fragment *d* was found together with fragment *a* of the Iphidike dedication (IG I<sup>2</sup> 487 = *DAA* 3 = Kirchner, *Imagines* no. 13) and was taken to be part of the same column, despite the great differences in appearance of the two stones. However, the odd chance that both fragments used a form of *phi* all but unique seemed to support the combination. For the form of *phi* with a horizontal bar see Wilhelm, *AnzAkWien* 1934, 115, *id.*, *AM* XXIII (1898), 482, n. 2, and Raubitschek, *OJh* XXXI (1939), *BiblBlatt* 28. Only three Attic stone inscriptions with this form of *phi* are known, viz. IG I<sup>2</sup> 487; 609; and *Hesp* III (1933)

372 no. 1 = *DAA* 258 (cf. Raubitschek *loc. cit.* against Jeffery, *BSA* XXXIX (1938/9) 91). There are, however, a good number of *graffiti* with this form; cf. the following: Agora P 12,212, a *graffito* in a context suggesting a date in the first half of the sixth century; Εὐφρο; Agora P 17,682, P 18,063, P 18,066, three ostraka cast against Themistocles of the deme of Phrearchioi, probably in 482. Agora P 10,275, ostrakon cast against Xanthippos, the son of Arifbron. Acropolis 1498 (Graef-Langlotz, *Die Antiken Vasen von der Akropolis zu Athen* II, pl. 93). (I owe my knowledge of the Agora pieces to the kindness of Eugene Vanderpool, who will publish them with other ostraka and *graffiti* in *Hesperia*.)

The majority of these examples date to near the turn of the century, when the character of Attic writing and spelling underwent considerable changes. There was a certain amount of confusion prevalent at the time, especially among the forms of circular letters (see also n. 17). The Agora collection of ostraka provides new examples of this phenomenon.

<sup>7</sup> *Adelt* 1891, 74.

connection not only by the difficult use of ἀγών (see page 148 below); but also by the consideration that it was impossible that the Callimachus who died in the battle should have made a dedication in respect of that battle. He therefore formed the theory that the polemarch had made this dedication after and in celebration of his conduct of the Panathenaic games (Ἀθηναίων τὸν ἀγῶνα) in 490. From this inscription and from other considerations Lolling concluded that previous to perhaps 487 B.C. one of the polemarch's functions had been the conduct of the Panathenaic Games, a duty we know to have been discharged later by the ten *athlothetai* (Aristotle Ἀθπ 60).

After Lolling, however, editors without exception connected the inscription with the battle of Marathon. The difficulties which must have worried Lolling were either ignored or met in various ways.

U. Köhler<sup>8</sup> was, apart from a suggestion by Kirchhoff in the apparatus to the supplement to *IG* I 153, no. 350, the first to advocate the restoration of Μέσον in the second line of the inscription, and thereby to refer the ἀγών to the battle of Marathon. He proposed to reconcile the text μ' ἀνέθεκεν with what we know about the death of Callimachus from Herodotus<sup>9</sup> by suggesting that the polemarch's son had set up a statue of his father after the battle, thus making the son the subject of ἀνέθεκεν. Although he had thus faced one difficulty, he did not attempt to show how the inscription could be restored, and therefore his view has had little influence, though it is found adopted in print as late as Berve's *Miltiades*.<sup>10</sup>

Hiller's version, published in 1919<sup>11</sup> in a preparatory study for the *Editio Minor* of the *Corpus*, is the foundation of all subsequent treatment of the inscription. He hazarded a guess as to the nature of the dedication (ἀγγελος ἀθανάτων), and, by giving for the first time a restoration of the first line, he fixed its length, and made the restoration of the second line a thing worth attempting.

I repeat Hiller's text, this time arranged in verses:

[Καλλίμαχος μ' ἀν]έθεκεν Ἀφιδναῖος τάθηναιαι;  
ἀν[γελον ἀθ]ανάτων, τοὶ Ὀ[λύμπια δόματ'] ἔχουσιν.

[Καλλίμαχος πολέ]μαρχος Ἀθηναίων τὸν ἀγῶνα;  
τὸν Μέ[δου τε καὶ Ἡ]λένων δ[ρινε μέγιστον];  
πασιν Ἀθηναίων Μα[ραθῶνος ἀν] ἱερὸν ἔλσος].

Hiller thus separated the two inscribed lines. The dedication, in his view, had been made in Callimachus' life-time on an unknown occasion. The

<sup>8</sup> *Hermes* XXXI (1896), 150.  
<sup>9</sup> VI, 114.

<sup>10</sup> *Hermes, Einzelschriften* 2 (1937), 87, n. 1.

<sup>11</sup> *Hermes* LIV (1919), 211.

second line was added by the Demos after his death in honour of his heroism and achievement.<sup>12</sup>

Hiller's solution of the problem was more acceptable than Köhler's. He also provided a plausible text for the epigrams. Nevertheless an examination of the column makes it impossible to believe that Hiller is right. The two flutings are worked in precisely the same fashion, making it virtually certain that they were cut on one and the same occasion. Again, as the flutings were surely prepared to receive two lines of inscription, there can be no doubt that the two lines were inscribed together, and this is confirmed by the fact that they are both engraved by the same distinctive hand.

The puzzle which both Köhler and Hiller had sought to solve is genuine enough, for, as far as our evidence goes, ἀνέθηκεν always means the formal act of dedication, and not of vowing alone. There are many inscriptions, Attic and non-Attic, where a distinction is made between these two acts. 'A dedicated (ἀνέθηκεν) me, B made the vow (ἠόξατο)' is the formula found in such cases. Examples are IG I<sup>2</sup> 503; 684; 709 (better *DAA* 221), and the same formula is found in a modified form on Hieron's monument at Olympia, set up by Deinomenes (Pausanias VIII, 42, 9):

δῶρα ἱέρων τάδε σοι ἐχαρίσατο· παῖς δ' ἀνέθηκε  
Δεινομένης πατρὸς μνημα Συρακοσίου.

We cannot, I think, restore this formula in our inscription, saying that Callimachus made the vow and that someone else dedicated the statue: but unless we can do so, no purpose is served by restoring, as some have done,<sup>13</sup> [εὐχόμενος πολέ]μαρχος at the beginning of the second line.

If we take ἀνέθηκεν literally, and we have no right to do otherwise in face of the evidence adduced, it follows that the dedication, and not only the vow, must have been made by Callimachus before his death. In other words, the dedication had no connection with the battle of Marathon. Yet what survives is enough to show that the whole epigram was inscribed after the battle and Callimachus' death. There can thus be only one conclusion, namely, that the epigram on the column was inscribed after the statue had already been dedicated, not only the second line, as Hiller thought, but the whole of the

<sup>12</sup> In the second verse Hiller preferred τοι Ὀδυσσεύς δέμαρ' ἔχουσιν to τοι Ὀδυσσεύς δέμαρ' ἔχουσιν, thus avoiding the hiatus. Homer always has the participial form Ὀδυσσεύς δέμαρ' ἔχουσιν, but the indicative occurs in *hymn.* III, 445 and *hymn.* VII, 21.

For the metrical problems in the first verse see Wilhelm, *Anz. d. W. 1934*, 112. Proposed remedies have been correction into τῶδ' ἔχουσιν or δέμαρ' Ἀχιλλεύς. The first alternative is preferable. J. M. Cook suggests

to me that the metrical difficulties might be due to the possibility that the first verse was taken over with very little change from an original dedicatory inscription in prose (see p. 142). This may have read:

Καλλίμαχος μ' ἀνέθηκεν τῶδ' ἔχουσιν Ἀχιλλεύς.

(Cf. Wilhelm, *Beiträge* 6.)

<sup>13</sup> K. Schmidt *ap.* Laudien, *Griechische Inschriften* etc. 52, and Meritt *ap.* Raubitschek, *Hesp.* XIV (1945), 367.

epigram. This assumption may also help to explain the unusual feature of the column, two flutings carved into an otherwise plain column.<sup>14</sup>

The original dedicatory inscription must have stood on the base which supported the column. This is now lost, or at any rate has not yet been identified.<sup>15</sup> The surviving epigram, added, as we now suggest, after Callimachus' death, must be regarded as a special tribute to his heroism, and likely enough was displayed in this prominent form in reaction to Miltiades' claim. Further comment on this point will have to be reserved until the text of the epigram is established.

After Hiller's restoration of the epigram for *IG I<sup>2</sup>*, there is only one more that we need mention, that by Wilhelm, published in 1934 in an article<sup>16</sup> dealing with the then newly discovered Agora fragment of *IG I<sup>2</sup> 763*. Wilhelm adopted Hiller's restoration of the first line, but proposed a new text for the second. He pointed out that in fragment *f* there was, after ελεονο, a trace of another letter in the break of the stone. The slanting stroke, barely visible on the photograph (PLATE 11(a)), he took to be part of an *alpha*. He also urged that reference to Callimachus' death was required in the second line. The restoration θάυε took account of both his observations, and he adopted it into his text. Admittedly the stone gives an *omikron* and not a *theta*, but Wilhelm assumed that the engraver had omitted to cut the cross, which may have been added in paint. Many instances of similar omissions were collected by the master, who had for long been interested in the vagaries of the circular letters, particularly the *theta* and the *phi*.<sup>17</sup>

Wilhelm's text was as follows:

[Καλλίμαχος . . . . κ.τ.λ.  
 ἀν[γέλον . . . . κ.τ.λ.  
 [ὅς σπέσας πολέ]μαρχος Ἀθηναίων τὸν ἀγῶνα:  
 τὸν Μέ[δον τε καὶ ὁ]ελέον θά[υε δούλιον ἔμαρ:]  
 παῖσιν Ἀθηναίων Μα[ραθῶνος ἐν ἄλσει ἀμύνον].

Wilhelm's view was that the polemarch had made the vow shortly before falling in the engagement, and that the dedication was posthumously carried out by his relations, friends, or even the Demos. Wilhelm was right in taking, against Hiller, the two lines together, but he ignored the difficulty caused by ἀνέθηκεν.

<sup>14</sup> See pp. 140 and 160.

<sup>15</sup> See pp. 146 and 160. An oinochoe by the Trophy Painter (Beazley, *Attic Red-Figure Vase Painters*, 719 no. 8) shows a column dedication on a base in two degrees. The inscription is on the upper base block.

<sup>16</sup> *AntArchWien* 1934, 211 ff.

<sup>17</sup> For confusions between *theta* and *phi* see Wilhelm,

*ibid.*, 115; add to his examples *IG I<sup>2</sup>*, 982, a precise parallel where the cross has been left out in the *theta* of θωκ (Kirchhoff's *varia lectio* in *IG I*, 48-9, 477e is mistaken). Add to his references the Apollodoros signature on the Castle Ashby cup (*JHS* LIII (1933) pl. 6, Beazley, *op. cit.*, 87 no. 3); cf. also above n. 6 *ad fin.*

The identity of the statue had so far been unknown. Köhler's guess no longer requires discussion. The ἄγγελος ἀθανάτων was considered by Hiller, the author of this brilliant conjecture, to be a Hermes rather than an Iris or a Nike, and this was accepted by Wilhelm. In 1940, however, Raubitschek published his discovery,<sup>18</sup> made in the course of his study of the Acropolis dedications, that one of the marbles on the Acropolis, a winged woman held to be a Nike<sup>19</sup> (Acrop. 690), fitted into an Ionic capital which he himself had reconstructed from fragments.<sup>20</sup> This capital in turn had the same diameter, where it would have joined the shaft, as the Ionic column bearing the epigram of Callimachus. Moreover, it was the only capital on the Acropolis which fitted this shaft. The column, in turn, was the only Ionic shaft to fit the capital.<sup>21</sup> It was claimed then by Raubitschek that the ἄγγελος ἀθανάτων had been found. It was, after all, not a Hermes, but a Nike, to all appearances a private victory dedication to Athena vowed by the polemarch before or during the battle, and set up after the victory by his heirs.

<sup>18</sup> AJA XLIV (1940), 53. Reports and discussions of the discovery had already in preceding years appeared in a number of periodicals (cf. the bibliography in DAA and Tod<sup>2</sup>, addendum to no. 13). Most of these publications show a reconstruction of the whole dedication sketched by Raubitschek.

<sup>19</sup> Payne and Young, pl. 120, 1-2; Schrader, *Marmor-bilderwerke*, pl. 91/2 (text, 122 no. 77).

<sup>20</sup> See Züchner, AA 1936, 327 ff.

<sup>21</sup> This and no more is the evidence for the attribution. No actual join is preserved, but there were not so many ἄγγελοι ἀθανάτων on the Acropolis, and the case for Raubitschek is certainly stronger than Jacoby (*Hesp. XIV* (1945) 158 n. 8) implies. However, Raubitschek (AJA l.c.) takes as premise what he should set out to prove, when he says, 'Yet it is hard to understand why a general should promise before a battle to dedicate to the goddess Athena a statue of Hermes. It would obviously be more likely for Callimachus to promise to dedicate, in case of victory, a statue of Nike.' (Italics are mine.)

I am in any case doubtful whether a general would have dedicated as a private dedication a Nike after a battle. Callimachus was no Gelon (cf. Tod 17 and commentary). Moreover, since I believe that the dedication of the statue was unconnected with the battle, I consider Hampe's attractive suggestion (*Die Antike XV* (1939), 170) that the Pan-headed *kerkyon* from the Acropolis (de Ridder, *Bronzes trouvées sur l'Acropole d'Athènes*, no. 409, fig. 83; *Die Antike XV* (1939), 172 fig. 3, 4; cf. also F. Crome, *AM LXIII/IV* (1938/9) 120, no. 11) belongs to the statue unlikely to be true.

I should like to think of the statue as an Iris rather than a Nike (cf. however n. 25a), but one cannot be confident. Nike is not in literature called ἄγγελος ἀθανάτων, nevertheless she is one (cf. Roscher III, 307, and above all the *pelikai* Berlin 2166 and 2167 (Argos Painter, Beazley, *Attic Red-Figure Vase Painters*, 176, 5 and 6; *AZ* 1875 pl. 10) where Nike, so called in the inscription, holds a *kerkyon*. They enable us to give the name Nike to some other unnamed figures holding

the *kerkyon*; e.g. a *pelike* Cab. Méd. 392 by the Providence Painter, Beazley, *op. cit.*, 433, 38). Cf. also Mayer in Roscher II, 354, s.v. 'Iris', who had already collected the evidence quoted here.

Against Jacoby's insistence that the ἄγγελος ἀθανάτων must be Hermes, as Hiller had thought, weighs the fact that the dedication of a Hermes to Athena would be difficult to explain (Cf., however, IG IV 1588, 10, the inventory of the temple of Damia and Auxesia in Aegina, for the dedication of a Dionysus in another deity's shrine). Moreover, anthropomorphic statues of Hermes, showing him as ἄγγελος ἀθανάτων, are unknown at this period, although vase-painters depict him frequently in this, his epic (post-Iliad), role. He also occurs so in relief sculpture, e.g. Acrop. 702, Hermes and the Aglaurids, because there, as in vase-painting and other narrative arts, he was represented as part of a story. In the round, as a single image, he is at this time best known as the Arcadian *κροκόπορος* (cf. Roscher I, 2994 ff.; Nilsson, *Geschichte d. griech. Religion* I, 476). The earliest appearance in substantive sculpture of the ἄγγελος ἀθανάτων known to me is the Arcadian 13219; *AE* 1904, pl. 9; Lamb, *Bronzes* 153 and pl. 57b, dated by her in the second quarter of the fifth century). Later, in the middle of the century and beyond, come the mid-Phidian Hermes Ludovisi, the sitting Hermes from the Acropolis (Acrop. 1346; *AM XXXVII* (1912), pl. 13), and the Polyclitan statue. All these examples are much later than the Persian wars; they represent a new conception of free sculpture. Such early dedications to Hermes from Attica as have come down to us appear to have taken the form of herms, cf. DAA 326 (and commentary) and p. 500, also Schrader, *Antike Plastik, Festschrift Amelung* 227 ff. From Samos we know of a greater than life-size statue of Hermes carved perhaps in the last quarter of the sixth century; but only the foot remains (Buschor, *Altgriechische Standbilder* 51, figs. 186-188), cf., however, Rumpf's doubts in *AA* 1935, 394 ff. Nothing useful is known about the appearance of the Hermes Agoraios, roughly contemporary with the Callimachus dedication (Overbeck, *Schriftquellen*, nos. 470-474).

The marble 'Nike' (or Iris, for from what survives it is impossible to tell which it was) had previously been dated on stylistic grounds to about 490 B.C. Now confirmation of the date seemed to have been afforded, and an important late archaic dedicatory group could be restored to something like the form it had when it was set up on the Acropolis shortly after 490, only to be destroyed by the Persian invader less than ten years later.

Raubitschek's conclusion as to the date and circumstances of the dedication was based on Wilhelm's restoration and interpretation of the text, which, as we have seen, does not deal fully with all the problems presented by the surviving text of the inscription. In fact, as it is now realized that the statue had been dedicated before Marathon, the sculpture still remains undated, except on grounds of style. All we can say is that it will have been carved before 490.

There remains the difficulty, if so we call it, of explaining how Callimachus came to dedicate so exceptional a statue on the Acropolis. We can give no answer to this question. The epigram gives no reason for the dedication; the emphasis there is on the second line extolling the dedicant. A reason for the dedication will have been given on the base with the original dedicatory inscription. In the absence of that inscription it is useless to guess what the occasion of such an offering may have been.<sup>21a</sup>

## II

Ever since Köhler editors have been at one in reading τὸν ἐγὼνα τὸν Μέδον. Hiller completed the restoration with his Μέδον τε καὶ ἑλένον. Yet for an Athenian to call the battle of Marathon simply 'the contest between Medes and Greeks' is strange. In fact, we have evidence that the Athenians were acutely aware that, though the enemy was threatening not only themselves but the whole of Greece, they (and the Plataeans) alone had stood in her defence.<sup>22</sup>

Whereas the restoration and interpretation of ἑλένον seems fairly secure, that of Μέδον is not. An examination of the stone reveals that the fragmentary letter in the break after the *mu* was an *alpha* and not an *epsilon*. This seems to me quite certain. Measurement of the letters in the inscription shows that the angle formed by the upright hasta and the top horizontal bar of the *epsilon* ranges from 65° to 75°. The angle formed by the hasta and the sloping bar of the *alpha*, on the other hand, varies from 40° to 52°. The relevant angle of the doubtful letter is 48°. An *alpha* may therefore be read with assurance, especially as enough of the downward-sloping bar survives to show the angle clearly (see PLATE II(b)).

If there is no *epsilon* on the stone, τὸν Μέδον τε καὶ ἑλένον cannot have

<sup>21a</sup> See n. 25<sup>a</sup>.

<sup>22</sup> See p. 149.

stood on it, and we must begin again the task of restoring the epigram. Before that, however, a few words on how the *epsilon* crept into the accepted text.

Lolling, in *ADelt* 1891, pl. A<sup>2</sup>, published a line drawing of the whole inscription, giving the critical letters as MF. It was the first time that the last letter of the fragment had been read and Lolling obviously thought that it was an *epsilon*, as he shows in his transcript, *op. cit.* 81. He was, however, conscientious enough to indicate that the stone gave only the hasta and two bars, the upper and the middle. In fact, the break runs just where the middle bar would be, making identification difficult. With the traces as given in Lolling's line drawing it would be hard to decide whether the letter had been an *epsilon* or an *alpha*. We need not imagine that Lolling saw more of the edge of fragment *e* than is now preserved, because, though his drawing is good, it is not free from inaccuracies. To mention only one, the one most relevant perhaps, on the same edge of fragment *e*, in the first fluting, he shows only  $\nu$ , whereas the stone quite clearly preserves  $\mu$ , i.e. a *nu* or a *mu* or a *gamma*. In his text, indeed, Lolling says that the letter in question is probably a *nu*, but it is his drawing that is now on trial. There are also a number of other inaccuracies which a comparison of the line drawing with our photographs will reveal. Too much importance, therefore, need not be attached to the witness of Lolling on this point.<sup>23</sup>

Of later editors none but Hiller and Wilhelm had any first-hand acquaintance with the stone, or even with a squeeze. Kirchhoff copies Lolling, and Köhler in his turn thought that he reproduced Lolling and Kirchhoff. In fact, he reproduced neither the one nor the other, and by printing the relevant letter as  $\epsilon$  he threw away caution and accuracy. The *epsilon*, and with it the restoration Μέδων, had now established itself, and seemed confirmed when Hiller later found that the mysterious ελενονο (fragment *f*) resolved itself into  $\epsilon\lambda(\lambda)\epsilon\nu\nu$ .

### III

Our own restoration will be governed by the observation that the spacing of letters in the second fluting is slightly closer than in the first. This is particularly noticeable in fragment *f*. The writing is too irregular and the continuously intact surface too small to make precise measurement practicable. It may be observed, however, that if we count the number of letters between two points, where letters in the two lines happen to coincide in position, one alongside the other, we find that line 2 gains one letter approximately every

<sup>23</sup> There appears to have been subsequent damage to the edge of fragment *e*. Lolling still gives the final sigma of  $\nu\alpha\theta\iota\sigma\pi\alpha\gamma\gamma\epsilon\varsigma$ , which is now lost. The squeeze

and photograph of the Berlin Academy also had the letter. But Kirchner's photograph in his *Imagines* shows the present state of the stone.



eighteen places of the first line. Thus, in the first line, between the *phi* of Ἀφιδναῖος and the *alpha* of ἀνγέλου there are eighteen letters inclusive, whereas there are nineteen inclusive between the *epsilon* of Ἀθναίων and the *mu* of μα[. in line 2. We must note, however, that the punctuation mark in the first line must not be counted as one letter, as it does not take up a letter-space. For all we know, it may have been put in after the line had been engraved. The distance between the *iota* and the *alpha*, between which the punctuation is placed, is one centimetre, the distance between *iota* and *alpha* elsewhere in the same line. In the second line, however, a definite space is allotted to the punctuation, which should therefore be counted as one letter-space. The reason for this discrepancy is that in the second line the engraver could not follow the practice of squeezing the punctuation marks between letters without displacing them. *Alpha* and *tau* do not lend themselves to this practice, but no such difficulty existed between *iota* and *alpha* in line 1.

For the first line I accept Hiller's restoration. This fixes the number of letters to be supplied in the gaps of line 2, which, following Wilhelm, I begin as follows:

ῥος(σ)τέσας πολέ]μαρχο[ς] Ἀθναίων τὸν ἀγῶνα

I have no doubt that the line began with a relative pronoun. The alternative, a participle depending upon ἀνέθηκεν, is unacceptable not only because of its position, so far removed from the main verb, with a relative clause in between, but also because it would imply that the dedication was made in circumstances to be described in this line. It has, however, been shown that that is not so, at any rate if the commonly accepted connection of this line with the battle of Marathon is to be upheld.

If ῥος is accepted, then στέσας naturally suggests itself to complete the phrase στήσαι τὸν ἀγῶνα, to 'set up the *agon*'.<sup>24</sup> The use of the word ἀγών here seems extraordinary. It rightly troubled Lolling, though none of his successors. In Homer the word means assembly or place of assembly. In the meaning of 'games' or 'contest' it does not seem to occur before *hymn.* I, 150 and *hymn.* VI, 19. From then on it kept this as its main meaning, e.g. Simon. 21 (10), Diehl. See also *ÖJh* XXXI (1939), *Beiblatt* 30, IX = DAA 327 and DAA 326 for this use in second quarter of the sixth century. The tragedians extended its sense to include 'struggle', e.g. Aesch. *Choeph.* 584, 729, and prose writers then took it over for war and battle.

There can be little doubt, then, that ἀγών in our epigram would, at first reading, have been taken to mean 'games'; only as an unusual metaphor

<sup>24</sup> I write ῥος(σ)τέσας, since the form ῥθα(λ)έσας in verse 4 shows that gemination of consonants did not occur in this inscription; hence also Καλ(λ)ίμοχος.

could it have signified 'battle'.<sup>25</sup> I can think of no reason why the poet should have used this word, except, perhaps, in reference to the lost original dedicatory inscription. In that case the point escapes us now.<sup>26</sup>

The unusual significance of ἀγών obliges us, I think, to fill the ten (not nine!) spaces in the lacuna that follows with:

τὸν Μα[ραθῶνι πρὸ ἑ]λένου

τὸν ἀγῶνα τὸν Μαραθῶνι unqualified could hardly have referred to the battle of Marathon (even granted that Callimachus' achievement was common knowledge), seeing that there were games celebrated there in honour of Herakles (Schol. ad Pind., *Olymp.* IX, 134, ed. Drachmann I, 298; cf. also the inscription published by Vanderpool, *Hesp* XI (1942), 344 ff. = SEG X, no. 2).

We must have then 'who set up the agon, the one that took place at Marathon to protect the Greeks', to give a tolerably satisfactory sense to the passage. The use of πρὸ for 'on behalf of' is as old as Homer, derived, as it is, from 'in front of'. The hiatus is legitimate, though not easy (cf. Maas, *Griechische Metrik*, paragraphs 121, 141). πρὸ Ἀχαιῶν occurs twice in Homer (*Il.* IV, 156, and X, 286; cf. also IV, 382 πρὸ ὁδοῦ for the hiatus) in the same meaning, though the hiatus there is in a different metrical position.

The sentiment expressed in this part of our epigram reminds us of:<sup>26</sup>

Ἑλλήνων προμαχοῦντες Ἀθηναῖοι Μαραθῶνι  
χρυσόφορων Μήδων ἐσφόρεσαν δύναιιν.

The date of this is not certain,<sup>27</sup> but we know that the same view of Athens' role was expressed in the first of the Marathon epigrams (IG I<sup>2</sup> 763), which certainly were composed and inscribed before 480.<sup>28</sup>

The restoration of the remainder of the epigram presents grave difficulties. After ἐλένου we have on the stone *OI* which Wilhelm wanted to make into *ὅτι*. This is not impossible, but is a counsel of despair. His insistence that the epigram must have contained a reference to Callimachus' death does not strike me as cogent,<sup>29</sup> if he meant *totidem verbis*, and I prefer to complete the word to read *δοῦ[ου]* in the sense of reputation and glory.

<sup>25</sup> This is, I think, confirmed by the valuable evidence of an oracle given sometime in the nineties or eighties of the fifth century, and reported by Herodotus (IX, 33; cf. also Paus. III, 11, 6):

Τεσσαμένθ' γὰρ μαντεύμενος ἐν Δελφοῖσι . . . . . ἀνέλε ἡ Πυθίη ἀγῶνας τοὺς μεγίστους ἀναρῆσθαι πέποι. ὁ μὲν δὲ ἀναρῶν τοῦ χρηστήριου προσέειπε γυνυστοῖσι ὡς ἀναρῆσόμενος γυνυστοὺς ἀγῶνας. . . . . Ἀσπιδωπίνοισι δὲ μισθόντες οὐκ ἐς γυνυστοὺς ἀλλ' ἐς ἀρίστους ἀγῶνας φέρειν τὸ Τεσσαμενῶ μαντήιον . . . . .

<sup>26</sup> What games, if any, the polemarch conducted in the first decade of the fifth century is not a question

which requires discussion here. Some event connected with games may, however, be the explanation for the original dedication of the statue, if it was a Nike.

<sup>27</sup> See n. 66.

<sup>28</sup> See n. 66.

<sup>29</sup> See n. 64.

<sup>30</sup> Nor need we be concerned about the absence of any mention of the 'Medes', now that they have disappeared from the text. Here we cannot do better than quote Wilamowitz' comment (*Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen*, 1897, 306 ff. reprinted in *Sappho und Simonides* 192 ff.), made when the newly discovered inscription showed that the original

The last preserved letters of the inscription are  $\mu\iota$ . Here, too, we can now be certain what the fragmentary letter was. The possibility of either *alpha* or *nu* has been generally admitted. An *alpha* has, however, been restored by all recent editors, as the restoration  $\text{Μα[ραθῶνος]}$  invited itself there, since the place where we have restored  $\text{Μα[ραθῶνι]}$  was taken by  $\text{Με[δov]}$ . As a matter of fact, it is highly unlikely that the letter was an *alpha*. The height of the uprights of the *alphas* in the inscription ranges from 2.5 to 2.7 cms. with one upright of 2.4 cms., those of the *nus* from 2.0 to 2.2 cms. with one upright of 2.4 cms. The height of the stroke of the letter under consideration is 2.2 cms. It is therefore almost certainly a *nu*.<sup>30</sup> A reference to Marathon is therefore not indicated here, which, incidentally, makes the restoration of  $\text{Μα[ραθῶνι]}$  where we have given it more probable.

The  $\mu\nu$  is easily completed into  $\mu\eta\mu\eta$  or  $\mu\eta\mu\alpha$  and the subjects of the end of the epigram are then  $\delta\nu\omicron\mu\alpha$  and  $\mu\eta\mu\eta$ —and suitable ones they are. These two themes were often treated in combination in sixth- and fifth-century epigrams, usually in the formula 'A gave glory to his city on the one hand, and took renown or *arete* for himself on the other'. Compare the following examples of the use of this formula.

(i) From the dedication of Mandrokles in the Heraion at Samos (Herod. IV, 88):

αὐτῶ μὲν στέφανον περιθείς, Σαμίοισι δὲ κῦδος, . . .

(ii) From the epigram engraved under the casualty-list of 440-439 (*IG* I<sup>2</sup> 943 = Geffcken 86 = Hiller 52 = Tod 48):

σφετέρων δ' εὐκλείεσσι πατρίδα,

αὐτοῖς δ' ἀθάνατον μνῆμ' ἀρετῆς ἔθεσαν.<sup>31</sup>

A different, though in some ways parallel, treatment is found in the

epigram over the Corinthian grave on Salamis said only

[ὁ δὲ εἶναι εὐχρηστικὸν καὶ ἡλικίαν αὐτοῦ Κορινθίου  
[ὡς δ' ἐπὶ τῇ αἰῶνι] [τῶν δὲ ἐκείνων Σαλαμίνος]

(*IG* I<sup>2</sup> 927 = Geffcken 96 = Hiller 20 = Tod 16 = Diehl 90 (96)), and nothing about the couplet

ἡνδραϊά Φοινίκας ἦλκας καὶ Πέρσας Πάριον  
καὶ Μήδους ἡγῶν Ἑλλάδα πρὸς ἄστρον

of the later tradition, 'Das Gedicht als solches ist fertig mit der Erklärung "Wir sind Korinther und liegen auf Salamis". Dass kein Wort des Selbstruhmes dabei steht, keine dass die Gelegenheit näher bezeichnet, bei der die Korinther hier gefallen waren, ist die echte Bescheidenheit der grossen Zeit; oder sollen wir sagen, ihr Stolz, so war auch ihr Stolz ein echter; auch die späte Nachwelt kann vor diesem Grabe nicht zweifeln, welcher Kampf diese Männer dahingerafft hat.'

It was assumed, no doubt rightly, that the fate of the Athenian Commander-in-Chief would be known to everyone likely to read the inscription.

<sup>30</sup> I owe this observation to advice kindly given me by Professor H. T. Wade-Gery.

<sup>31</sup> αὐτοῖς here stands for εὐτοῖς. For use of the personal pronoun as reflexive in archaic literature, see Wackernagel, *Vorlesungen über Syntax* II<sup>2</sup>, 89; cf. Buck, *Dialects* 91/2; also *IG* V. 1, 213 *passim* for examples in fifth-century Laconia (I owe the references to K. Dover).

Note also that there is assimilation in lines 2 and 3, but none in line 4 (ἀθάνατον μνῆμα). This shows how dangerous it is to argue from one part of an inscription to another; cf. e.g. *IG* I<sup>2</sup> 945, 5 (Potidaea epigram) and the comments in *JHS* LIII (1933) 78 n. 24 and *Hesp* XII (1943) 22 n. 44. It is not essential to read  $\text{ἐπεσον}$  there.

Simonidean epigram for the men of Tegea (*A.P.* VII, 521 = Diehl 122 (102) = Hiller 39):

οἱ βούλοντο πόλιν μὲν ἐλευθερίᾳ τεβαλυσάν  
παῖσι λιπεῖν, αὐτοὶ δ' ἐν προμάχοισι θανεῖν.

Finally, we find the same formula used to express a somewhat different contrast in Thucydides II, 43, 2: κοινῇ γὰρ τὰ σώματα διδόντες ἰδίᾳ τὸν ἀγῶν ἔπαινον ἐλάμβανον. . . . There was tradition behind those words of Pericles.

I doubt whether in our epigram we can restore the contrast between what Callimachus did for his city, and what fate he met himself, in quite the same juxtaposition as we have found it in the examples just quoted. There are, however, also examples in the fifth century where this contrast is softened, as, for instance, in the last of the Potidaea epigrams (IG I<sup>2</sup> 945 = Geffcken 87 = Hiller 53 = Tod 59; cf. *Hesp* XII (1943), 19):

φυσχᾶς δ' ἀντίπρο[π]α θέντες  
ἐ[λλ]άχσαντ' ἀρετὴν καὶ πατ[ρ]ιδ' εὐκλ[έ]ισαν

(cf. also IG I<sup>2</sup> 1085, 4 = Hiller 50 = Tod 41).

Taking our own epigram again, it seems to me that in the lacuna at the end of the penultimate verse a verb is undoubtedly required. If we fill it merely with an epithet to *δομα* we shall have to leave the verb right to the end of the last line, an arrangement which will make the epigram hard to grasp. This consideration makes impossible a restoration on the lines of the Simonidean encomium on the dead of Thermopylae,<sup>32</sup> such as:

δυ[ο]μ' ἀφθιτον αἰε[ί]·  
παῖσιν Ἀθηνάιον, μν[έ]μεν τ' ἀρετῆς κατέλειπεν].

This version also has the disadvantage of taking the dative παῖσιν Ἀθηνάιον with κατέλειπεν of the last verse. In fact, we do not find that the people to whom the fallen citizen leaves the memory of his *arete* are defined; certainly no dedication would limit the extent of a man's future renown. There is, therefore, a presumption that παῖσιν depends upon a verb in the previous verse, and if that is so we shall do well to use the caesura in the last verse to start a new sentence, set off against the rest of the epigram by δέ. This would

<sup>32</sup> Diehl 5 (4). Dr. R. Pfeiffer and Miss V. Newnham kindly inform me that Wilamowitz' rearrangement in the last two lines cannot stand (*Sappho and Simonides* 140, n. 3). 'One has to make too many changes in order to restore pure dactylo-epitrites, viz. del. αὐτ' line 4/5; write δαα for δομα, line 5; insert καί, line 7; transpose something in lines 8/9. But none of these changes can be justified by any other reason (grammar, style), so

one had better leave the text as it is with the remark that for metrical reasons the text of lines 4/5—8/9 is doubtful' (Pfeiffer). I therefore quote the text as given by the codd. (lines 7 to 9):

. . . μορταρεῖ δὲ Λακωνίδας,  
ὁ Σπάρτης βασιλεὺς, ἀρετῆς μέγαν λαλοῦντας  
κόσμον ἔθεσάν τε κλέος.

relieve the strain on the memory and give more articulation to the whole. I suggest, therefore, the following restoration as a basis for discussion:

δυ[οι] ἐστεφάνωσεν:]  
 παῖσιν Ἀθηναίων· μν[ήμεν δ' ἀρετῆς κατέλειπεν].

'(who, setting up, as polemarch of the Athenians, the fight that took place at Marathon on behalf of the Greeks,) brought renown upon the children of the Athenians, and left behind the memory of his *arete*'.

I have restored thirteen letters in the penultimate verse in accordance with the principle outlined above. In order to obtain this number of letters I am obliged to assume that Ὀλύμπια δώματ' ἔχουσιν is spelt out in the first line without elision.<sup>33</sup> This assumption appears to be supported by the fact that there is a ledge preserved to the left of ἔχουσιν on fragment g, 1.8 cms. long and 0.7 cm. high, with no letter parts showing. It is difficult to account for this on any assumption other than that there was an *alpha* to the left of ἔχουσιν, the return-stroke of which ended just above the level still preserved. The thirteen letters do not include the verse separation marks, which I believe to have taken up no letter space, as their position between *nu* and *pi* is analogous to the position of these marks in line 1 rather than in line 2.<sup>34</sup>

#### IV

[ὅς(σ) τέσας πολέ]μαρχο[ς] Ἀθηναίων τὸν ἀγῶνα:  
 τὸν Μα[ραθῶνι] πρὸ Ἑ[λένων], δυ[οι] ἐστεφάνωσεν:]  
 παῖσιν Ἀθηναίων· μν[ήμεν δ' ἀρετῆς κατέλειπεν].

1. ἐστεφάνωσεν. The word often occurs in epigrams, and is particularly apposite here after τέσας τὸν ἀγῶνα. As often as not it is used in metaphor, e.g.:

καλλίστοις δ' ἔργοις Κα[ρ]ίκα γένος ἐστεφάνωσεν  
 (Hiller 56 = Tod 93),  
 ἐλεγείῳ[ς]  
 [τὴν Ἀράκο κ]ρηπίδ' ἐστεφάνωσ[εν ἰω]ν  
 (Hiller 59).

Compare also Pindar, *Oi.* I, 100, Simonides 94 (98), Diehl.

In our restoration, however, the word is used in its epic sense, where it is evidently the equivalent of περιτίθημι. This occurs in extant literature only

<sup>33</sup> See Meisterhans-Schwyzler, *Grammatik d. alt. Inschr.*, 69/70. Elision, where required by the verse, is often expressed and not expressed in the same epigram. I quote one example and give reference to others.

ταῦτ' ἀποδιδράσκον πῶθε ἰππὶ προγυρ' ἀγασθόν, *IG* I<sup>2</sup> 976 (Geffcken 47); cf. also *IG* I<sup>2</sup> 499 (Geffcken 7); 650 (Geffcken 11).

<sup>34</sup> Cf. p. 148.

in the passive and in certain tenses. But the passive surely presupposes an active, of which the chance of survival has preserved no instance. The following examples illustrate the epic use of the word, in which the subject of the passive verb is not the thing or persons surrounded, but that which surrounds:

*Il.* XV, 153: ἀμφὶ δὲ μιν θυόεν νέφος ἑστεφάνωτο.

*Il.* XI, 36: τῇ δ' ἐπὶ μὲν Γοργῷ βλοσυρῶπις ἑστεφάνωτο.

*Od.* X, 195: νῆσον, τὴν περὶ πάντος ἀπείριτος ἑστεφάνωται.

*Hesiod, Scut.* 204: περὶ δ' ὄλβος ἀπείριτος ἑστεφάνωτο.

If we turned the phrase restored in our epigram into the passive, we should have a construction identical with the foregoing examples:

οὗς περὶ ὄνομα ἑστεφάνωτο.

2. *πανσὶν Ἀθηναίων.* The phrase is common in epigrams and elsewhere in the late sixth and early fifth century (later examples seem to copy earlier usage, as *IG* I<sup>2</sup> 945, the Potidaea epigrams). Cf. *Herod.* V, 77 = *IG* I<sup>2</sup> 394 = *Tod* 12 and 43; *Plut. Themistocles* 8, 5 = *Hiller* 14; *Plut. Moralia* 350 b = *Pindar*, fr. 73 (*Schroeder*); *A.P.* VII, 257 = *Diehl* 119 (101). Similar is the *Μήδων πανσίν* of the *Eion* epigrams (see n. 46).

3. *μνῆμεν ἀρετῆς.* *μνήμα* occurs very much more frequently than *μνήμη* in epigrams and other commemorative inscriptions, and the verb used in connection with it is *τίθημι* or one of its compounds.<sup>35</sup> Only rarely is another verb found, and then there is usually occasion for comment.

The almost exclusive use of *τίθημι* is explained by the fact that *μνήμα* in epigrams of the archaic period as well as of the fifth century means the concrete 'reminder', the monument, whatever its shape might be, which carries the inscription, whether it be the casualty-list over the grave with its epitaph, or a discus, or an altar, a herm, or the statue and its base.<sup>36</sup>

There is one epigram which at first sight might seem to be an exception to this rule. It is preserved in the *Anthology*, and is now almost universally accepted as having once stood on the *Eurymedon* casualty-list (*A.P.* VII, 258 = *Diehl* 115 (105) = *Hiller* 42):

οἶδε παρ' Εὐρυμέδοντά ποτ' ἀγλαὸν ὦλεσαν ἦβην  
μαρναμένοι Μήδων τοξοφόρων προμάχοις  
αἰχμηταί, πεζοὶ τε καὶ ὠκυπόρων ἐπὶ νηῶν  
κάλλιστον δ' ἀρετῆς μνῆμ' ἔλιπον φθίμενοι.

<sup>35</sup> *ἐκτίθημι* on dedications, *ἐπιτίθημι* on epitaphs.

<sup>36</sup> For casualty-lists see examples about to be discussed; for the discus see *IG* I<sup>2</sup> 1019 (*Pfuhl, Malerei u. Zeichnung der Griechen* III, fig. 485, probably funerary; cf. *Jacobsthal, Diskoi* 27/8); for altar see *IG* I<sup>2</sup> 761, the altar of Pisistratus the Younger; for herm see *Plato, Hipparch.* 228 d, e (*Geffcken* 4 = *Hiller* 6). The one

surviving *Hipparchus* herm, *IG* I<sup>2</sup> 837, long lost but recently found again (cf. *Hermes* LXX (1935) 461, and *AM* LXII (1937) 1), does not have *μνήμα* τὸδ' Ἱππάρχου. For *μνήμα* as a dedicated statue see *IG* I<sup>2</sup> 530. Useful on this question is *Eichler, AM* XXXIX (1914), 138 ff.

μνημα could plausibly be translated here as 'memory', particularly since it is used with λείπειν instead of τιθέναι. But there can be no doubt that 'memorial' or 'monument' is the correct translation, and that the memorial meant is the casualty-list itself. This interpretation gives point to φθίμενοι, a word that would otherwise be superfluous after the first line. What the poet wanted us to know is that through their death in battle these citizens had left behind, in the casualty-list over the public grave, a memorial more honourable and glorious (κάλλιστον) than any μνημα of their *arete* that they could possibly have dedicated or obtained in any other way. The sentiment behind this will be discussed later. At this stage, though, it will be well to recall that a strong case has recently been made that the Eurymedon dead were, with one exception, the first war casualties to be publicly buried in the Kerameikos cemetery.<sup>37</sup> Also, the practice of erecting a casualty-list over the common grave had not been universal. This was, therefore, a fitting occasion for the poet to state briefly but pointedly the peculiar honour which their sacrifice had won for those buried here.

We find, then, that μνημα in archaic and fifth-century epigrams invariably refers to the concrete monument.<sup>38</sup> We can be almost equally definite about

<sup>37</sup> Jacoby, *JHS* LXIV (1944), especially 48 and 52.

<sup>38</sup> The possible exception is the first of the Potidaea epigrams, which appears in *IG* I<sup>2</sup> 945 (= Hiller 53 = Tod 39) as:

τοὶ ἐνοπλίοι ἀπὲρ ἐς τὴν  
νίκην εὐπρόκλητοι μνημ' ἔθετον [σ]τ[η]ν ἐκείνῃ.

'They took victory as their μνημα ἀπὲρ ἐς τὴν'. This bold transference of νίκη into something concrete is paralleled by the contemporary passage in Pericles' Funeral Speech (Thuc. II, 43, 2 and 3):

... ἐλάβοντες καὶ τὸν τόφον ἐπιστημέστατον, οὐκ ἐν ᾧ κείντοι μέλλουσιν, ἀλλ' ἐν ᾧ ἡ δόξα αὐτῶν περὶ τῷ ἐντυχέντι αἰεὶ καὶ λόγον καὶ ἔργον κατὰ ἀμνηστίας καταλείπεται. ἀνδρῶν γὰρ ἐμπροσθεν πᾶσα γῆ τόφος, καὶ οὐ στήλων μόνον ἐν τῇ οὐραῖᾳ σημεῖον ἐπιγραφῆς, ἀλλὰ καὶ ἐν τῇ μὴ προσηκούσῃ ἔργων μνήμη παρ' ἐκείνῃ τῆς γυνάμης μέλλουσιν ἢ τοῦ ἔργου ἐνδοκαιοῦται.

The whole earth is their grave, because their 'memorial' is not only the casualty-list with its epitaph at home in the Kerameikos, but even abroad, where there is no inscribed monument, the unwritten memory imprinted in the mind of each individual lives (to form the 'reminder'). (The last τοῦ ἔργου in the passage means 'monument'; cf. Raubitschek, *REA* XLI (1939) 217 ff. on the meaning of ἔργα in the preamble of Herodotus.) In the Potidaea epigram it is the νίκη εὐπρόκλητος, in the Funeral Speech the ἔργων μνήμη τῆς γυνάμης which forms the μνημα of the fallen. In both cases the strict meaning of μνημα has been widened in an unusual application of the word, and, in the case of the Potidaea epigram, of a whole formula (see p. 157).

There is no evidence, however, for such an extension in the use of the word before the late thirties of the century, and, in fact, the two examples just mentioned

may not be entirely unconnected with each other. (The evidence from the Potidaea epigram is not secure, as so much of the text has been restored: σπάρτες of the *Corpus* cannot stand, as an examination of the stone shows. Meritt *op. cit.* Raubitschek, *Hesp.* XII (1943), 22 reports seeing traces of *phi* and *theta* to be completed to φθίμενοι following an earlier restoration by J. U. Powell. When I examined the stone in unfavourable light conditions I could not be positive about these two letters, although an examination of the squeeze tends to confirm Meritt. The adoption of φθίμενοι need not cause any other changes in the text of the *Corpus*, although it removes one of the arguments for it.)

This absence of earlier examples makes it, in my opinion, impossible to restore the last two lines of our epigram to something like this:

ὅς[σιν] ἀπὸ τῶν οὐδ'  
παύσει Ἀθηναίων μνημ' ἀπὲρ ἐς τὴν νίκην.

'who left immortal renown for the children of the Athenians, to be the monument of his *arete*'.

The form of the epigram, a number of hexameters followed by a pentameter, would have a contemporary parallel, if Wilamowitz is right in his view of the original form of the epigram (Plut. *Aristid.* 19, *de maligna Herod.* 42 (873 b), Hiller 26 = Dichtl 107 (140)) on the altar of Zeus Eleutherios at Plataea (*Sappho and Simonides* 197. Cf., however, Jacoby, *Hesp.* XIV (1945) 185, n. 107. For the date, see Hiller *loc. cit.* against Wilamowitz *op. cit.* 188/9. Cf. also Wade-Gery in *JHS* LIII (1933) 73, n. 7 and 91, n. 86).

The content, however, of this restoration I believe to have been impossible for the time of the Persian wars, because I do not believe that μνημα would then have been used as an attribute of δόξα or δόξα. I also doubt whether Bowra is justified (*Great Lyric Poetry*, 356) in quoting the Thucydides passage just cited as parallel

the meaning of μνήμη, which in archaic and fifth-century epigrams always means 'memory', and never 'monument'. This, no doubt, explains the rarity of the word in epigrams, where we so often find μῆμα.

There may be one exception to this statement, which Nachmanson<sup>39</sup> found when looking for cases where μνήμη was equivalent to μῆμα. All his examples are late, except for an epigram from Tanagra, on a poros block, in epichoric script,—an interesting witness to archaic and knightly virtues—published by Dittenberger as IG VII, 3501, from Lolling's copy:

[Ποταλῖς] ἄ[νδρ] [φίλοι] ΝΝ///ΝΡΠ Ε[πῆ]θε[κα] θανό[ντι]  
Μ[αντιθέοι] χσέναν ἵπποσύναν τε σοφδί.

For the letters in capitals Dittenberger read στάλαν, but admitted in his apparatus that μ[ν]ῆμα would correspond better with Lolling's copy '*sed id sic usurpari posse pra* μῆμα *vel* μναμείον *non puto*'. Nachmanson did not share Dittenberger's doubts, and adopted μνάμαν as the true reading. The stone requires re-examination, and pending that we must suspend judgment.

After these findings<sup>40</sup> we are bound to restore μνήμεν in our epigram, a word which is recommended by the ease with which it fits into the metre. Μνῆμα, on the other hand, would, to my mind, be quite unsuitable here. If our view is correct, that the dedication was unconnected with Marathon and Callimachus' victory, then there can be no question of the statue being a μνήμα ἀρετῆς of the polemarch. But even if it had been vowed by Callimachus during or immediately before the battle, and set up after his death, μνῆμα ἀρετῆς could not have stood, for we may be certain that Callimachus, whilst alive, did not vow or dedicate a μνήμα ἀρετῆς for himself, in the way in which, for instance, Pausanias set up one for himself on the Bosphorus at a time when his *hybris* was already apparent.

Μνῆματα ἀρετῆς set up by individuals to celebrate their own *arete* are rare and essentially foreign to the ethics of the Greek brought up in a city state. His *arete* is not an inherited quality, as was that of an earlier aristocratic age, but had to be won by toil and effort, and even then it was for the fellow-citizens to say that it had been won. The examples of a μνήμα ἀρετῆς set up by the honorands themselves are clearly the exceptions, and are symptomatic of a conscious repudiation of the good-citizenship ideal. They display *hybris*

for the Simonidean encomium on the fallen at Thermopylae (Diehl 5 (4), 6):

ὁ δὲ σπῆδος οὐδὲν εὐδοξίων

Ἐλλὰδὸς εἰδωτο.

Thinking of εὐδοξία as a goddess came more naturally to the Greeks than thinking of δόξα as a μῆμα.

<sup>39</sup> *Erasmus* IX (1909), 52.

<sup>40</sup> For later (fourth-century and beyond) conflation of the two words, see Nachmanson *op. cit.*, who also

deals with the literary evidence. Cf. also *AJP* XLVIII (1927), 18–19. Hesychius identifies μνήμη with μνημόσυνον and is therefore thinking of later usage. One strange use of μνήμη in earlier literature occurs in Theognis 112, a section without the Kyrnos seal:

μῆμα δ' ἔχουσ' ἀγαθὸν καὶ χάριν ἔχοντα.

Here μῆμα would seem to be the equivalent of μνήμη. Cf., however, Hudson-William's commentary *ad loc.*



and also, perhaps, a reversion to the aristocratic self-judging attitude, which could be tolerated in militarized Sparta even less than in Athens.

μᾶνι' ἀρετᾶς ἀνέθηκε Ποσειδάωνι ἄνακτι  
 Πausanias, ἄρχων Ἑλλάδος εὐρυκόρου,  
 Πόντου ἐπ' Εὐξείνου, Λακεδαιμόνιος γένος, υἱὸς  
 Κλεομβρότου, ἀρχαῖος Ἡρακλέος γενεᾶς.

This dedication was set up near the Bosphorus, and is preserved for us by Athenaeus.<sup>41</sup> The boastful genealogy is of no less significance than the offensive ἄρχων Ἑλλάδος. Whatever Pausanias and his poet meant by *arete* in this epigram, it will not have excluded the aristocratic notion. The dedication at Delphi,<sup>42</sup> which was promptly erased by the Spartan authorities, was a personal μνήμα ἀρετῆς (even though the word *arete* does not occur in the poem by Simonides). The dedication was intolerable for that reason as much as for any other.<sup>43</sup>

Much the same may be said about another monument. It is a base at Olympia, in date not far distant from the other instances just quoted (*Inscriptionen von Olympia* 266 = Hicks-Hill 15 = Geffcken 73):

Πραξιτέλης ἀνέθηκε Συρακόσιος τόδ' ἔργαμα  
 καὶ Καταρινᾶτος πρόσθα (δ)ὲ Μαντινέαι  
 Κρίνιος υἱὸς ἔναπεν ἐν Ἀρκαδίαι πολυμέλο[ι]  
 ἔσλός ἐόν, καὶ οἱ μνῆμα τόδ' ἐστὶ ἀρετᾶς.

We know nothing about Praxiteles except what we learn from the inscription. Uprooted from his home, presumably in the service of the Syracusan tyrant, he now feels the need to assert his ancient nobility. His *arete* has clearly not been won by anything,<sup>44</sup> it is the noble's birthright, and can therefore legitimately appear on his own dedication.

Quite different from this is the *arete* of which we hear in fifth-century Attic public epitaphs. We have already indicated earlier where the difference lies.<sup>45</sup> Μνήματα ἀρετῆς such as are found in fifth-century Athens might perhaps

<sup>41</sup> Athen. XII, 536 a = Hiller 40.

<sup>42</sup> Thuc. I, 132; the version of A.P. VI, 197 in the first person is a grotesque travesty, and is not saved by its dialect.

<sup>43</sup> Cf. Jacoby, *Hesp* XIV (1945), 202, n. 160.

<sup>44</sup> Was he a victor at the games? There is no evidence either way, as we do not know what stood on the top of the base. But even if he was, the epigram would still be extraordinary.

<sup>45</sup> Important discussions on *arete* and the change in its content are to be found in Wilamowitz' commentary on the Skopas *skolon* of Simonides (*Sappho und Simonides* 173/4 and 176/7 with notes; see also *Aristoteles und*

*Athen* II, 406 ff.) and in Jaeger's interpretation of Tyrtaeus frag. 9 Diehl (*SB Berlin* 1932, 537 ff.; cf. also P. Friedländer, *AJP* LXIII (1942) 78).

The Simonides poem cannot, I think, form the basis of an estimate of the new meaning of *arete* in the city state, since it abandons rather than reinterprets the word *arete*. Jaeger's attempt, however, to connect the revaluation in Sparta with a definite historical situation, and his view that Tyrtaeus first gave expression to this changed view, seems to me to be most valuable. 'The crisis of the City is a greater leveller than democracy; it produces, as it were, in place of the old nobility of birth a new title to an aristocracy of

be set up by the deceased man's family, but most frequently this was done by the Demos, and then, again, usually for the fallen in battle. In such a case the dead man could, in a figure of speech, be said to have put up his own *μνημα ἀρετῆς*. In variations this motive occurs often in fifth-century Attic epitaphs on the casualty-lists. Cf. the preserved examples:

(i) Eurymedon epitaph (A.P. VII, 258), almost certainly from the casualty-list in the Kerameikos:

κόλλιστον δ' ἀρετῆς μνημ' εἰπὼν φθίμενοι.

(ii) 440/39 casualty-list from the Kerameikos (IG I<sup>2</sup> 943 = Geffcken 86 = Hiller 52 = Tod 48):

αὐτοῖς δ' ἀθάνατον μνημ' ἀρετῆς ἔθεσαν.

For αὐτοῖς see n. 31.

(iii) Potidaea casualty-list from the Kerameikos (IG I<sup>2</sup> 945 = Geffcken 87 = Hiller 53 = Tod 59); see above, n. 31 *ad fin.*, and n. 38:

ἀρετῆς τε]

νίκην εὐπόλεμον μνημ' εἰσέβον φθίμενοι].

The way the evidence points is clear—no one can set up his own *μνημα ἀρετῆς* except through death in battle.<sup>44</sup>

Returning now to the Callimachus inscription, we can see that the restoration *μνημ' ἀρετῆς* is quite impossible in the epigram, for Callimachus, on any theory, at least made the vow. In that case, however, he would not have

citizenship, which can only be earned in face of the enemy.<sup>45</sup>

1 Οὐδ' ἐν μνημασίην οὐτ' ἐν λόγῳ ἄνδρα τίθειν . . .

9 οὐδ' εἰ πάσαν ἔχει δόξαν πλήρη θούραος ἀνδρός.

An interesting illustration of this change in ethos and the content of *arete* is provided by surviving epitaphs and honorary decrees. Collections of post-Eukleidian inscriptions are full of praises of the ἀρετὴ καὶ ἀνδραγαθία or the ἀρετὴ καὶ σωφροσύνη of the honorand (cf. e.g. Larfeld, *Handbuch d. griech. Epigraph.* II, 771, 837, 857). But there is no archaic epitaph preserved coupling these words; instead we hear of ἀρετὴ ἢ δὲ σωφροσύνη (IG I<sup>2</sup> 986 = Geffcken 43; cf. also Simonides fr. 128 (115) Diehl or ἀρετὴ καὶ φιλοστονία (IG I<sup>2</sup> 530 = Geffcken 62). 'Aρετή in all these phrases is the unknown, but the associated virtues point to its content. Thus we find that the citizen-soldier's virtue of ἀνδραγαθία in war and σωφροσύνη in peace (cf. *ἀνδραγαθία δίδωμι* in the Skopas *stelen* of Simonides, also Peek *Kerameikos* III, 27) have replaced as claims to merit the more 'private' virtues of σωφροσύνη and φιλοστονία of an earlier age (for the aristocratic φιλοστονία compare *χορηγία ἡμετέραν* τι σοφῶ in the Tanagra epigram quoted on p. 155), and also the impressive catalogue of virtues in IG I<sup>2</sup> 1026, supplemented in SEG X, no. 458. Σωφροσύνη, as one might expect, continues on epitaphs, and is still, at times, found coupled with ἀρετή e.g. Geffcken 141 b, 145, 183, but there is a suggestion that it

becomes a domestic, a woman's virtue, in e.g. Geffcken 144, 150 a, 192.

<sup>44</sup> Aeschines, *Ctes.* 183, and Plutarch, *Cimon* 7, 2, tell with some variation the story that when the generals on their return from Eion asked the Demos for a reward, they were granted the honour of being allowed to dedicate three herms on condition that the names of the dedicants were not inscribed: *ἵνα μὴ τῶν στρατηγῶν ἀλλὰ τοῦ δήμου δοκῇ εἶναι τὸ ἐπὶ γράμμα* (Aeschines). In other words, the generals were not allowed to dedicate a *μνημα ἀρετῆς* in their own honour, apparently an illustration of the point argued in our text.

The epigrams are preserved by Aeschines, Plutarch, and Tacitus (*ad Lycophr. Cass.* 417; cf. Hiller 34 and the discussions by Wade-Gery, *JHS* LIII (1933) 71 ff.; Jacoby, *Hesp.* XIV (1945) 185 ff. Cf. also Gomme, *CR* LXII (1948) 5). They show clearly that in fact the dedication was made not by the generals, but by the Demos. This was so clear that Aeschines, in order to be able to draw his moral (cf. Jacoby l.c.), had to add to the prohibition of mentioning the names the entirely separate and incredible condition that the dedicatory inscription had to make it appear that the Demos had set up the herms. With this nonsense the whole context of the epigrams, as given in our literary sources, collapses, however plausible this or that element it may be, and they cease to be of any relevance to this discussion.

called the dedication his *μνημα ἀρετῆς*. So much has emerged from the discussion. Moreover, whoever gave the instructions, after Callimachus' death, to add the epigram on the column of the dedication standing already on the Acropolis (and there is no evidence who it was) could well have said that Callimachus had left behind the 'memory' of his *arete*, but never, I believe, that he left a 'memorial' of it. Such memorials in truth did exist at Marathon and in the city, but the *μνημα* mentioned in the epigram would have referred to this, the statue dedicated by Callimachus himself.<sup>47</sup>

4. ΚΑΤΕΛΕΙΠΕΥ. The aorist is the normal tense found in classical epigrams, in keeping with their tendency to avoid generalities and sentimentality, and their desire to describe simply the event which occasioned the composition of the poem. Deeds were allowed to speak for themselves. The present tense occurs only when the dead are either speaking or being spoken to, or where the relation to the dead of something now existing is described. The latter category has certain well-defined formulas, such as occur in:

\* ὅν θάνατον[ς δοαφυ]όες καθ[έ]χει (IG I<sup>2</sup> 987 = Geffcken 42)

and

[νῦν δ' ἅμ' Αἴα]ντος [νῆσος ἔχει Σαλαμῖς]  
(IG I<sup>2</sup> 927 = Geffcken 96 = Hiller 20 = Tod 16),

or in another way in

λήμμεν τῶν αὐχέϊ Θεσπιάς εὐρύχορος  
(Steph. B., s.d. 'Θέσπεια' = Hiller 19)

and

ἄνδρας μὲν πόλις ἔδε ποθεῖ καὶ δέ[μος] Ἐρεχθῆς]  
(Potidaea epigram IG I<sup>2</sup> 945, 10).

Apart, however, from these reflections on the present state of the dead, and the vividness of the personal address, the attention of the classical epigram is rigorously concentrated upon the past event which is praised, or the occasion of the epigram, and nothing is allowed to distract the gaze from the past. Therefore I find it difficult to believe that the 'Simonidean' epigram on the fallen at Plataea is contemporary<sup>48</sup> (A.P. VII, 251 = Geffcken 111 = Diehl 121 (99)):

\* Ἀσβεστον κλέος οἶδε φίλη περὶ πατρίδι θέντες  
κυάνεον θανάτου ἀμφεβάλλοντο νέφος  
οὐδὲ τευῶσι θανόντες, ἐπεὶ σφ' ἀρετῇ καθύπερθε  
κυδαίνουσ' ἀνάγει δώματος ἔξ Ἀἰδέω.

<sup>47</sup> Nor could a statue dedicated on some other occasion have become a *μνημα ἀρετῆς* after Callimachus' death, for the formula 'he gave glory to his city and took virtue for himself' refers to one and the same

action.

<sup>48</sup> Cf. Bowra, *Early Greek Elegists*, 196, against Geffcken.

The use of the present here goes well beyond the limited reflections upon the present state of the dead which we have just considered; and it describes, not a state of the dead or a relation to them, but an action which affects them; it is thus different from statements such as *ζῶν δὲ φθιμένων πέλεται κλέος* in the Aeschylean epigram *A.P.* VII, 255, or the first line of the Marathon epigrams, which has been restored by Wilhelm as:

ἀνδρῶν τῶνδ' ἀρετῆ[ς λάμψει κλέος ἀφθιτον]αίει.

The epigram *A.P.* VII, 251 is thus not acceptable as an early fifth-century composition. *Μνέμεν δ' ἀρετῆς καταλείπει*, similarly, would, in my view, not be a suitable restoration in the Callimachus epigram. It would describe present activity of the dead rather than his action in the past, the occasion of the epigram.<sup>49</sup>

Our choice of tense, then, lies between the aorist and imperfect. I adopt the imperfect for metrical reasons. For the use of the tense Kenneth Dover refers me to *Iliad* II, 107, and Wackernagel's comments on the passage in his *Vorlesungen über Syntax* I<sup>2</sup>, 182/3. In the *Iliad* passage *λείπε* is equivalent to *ἔλειπε*, as the previous line shows. Wackernagel takes the view that the semantic distinction between imperfect and aorist does not invariably hold, and that certain verbs, e.g. *ἔκλειψε* = *ἐκέλευσε*, more often than not, normally or commonly use the imperfect for the aorist. It may well be that (κατα)λείπειν comes, as Dover thinks, into this category.

It must be admitted, after all, that the last two words of the epigram, uncontrolled as they are by any knowledge of the number of letters to be restored, admit of several alternatives, between which we cannot finally decide; nor does it matter greatly, because the sense is secure, depending, as it does, upon *μνέμεν*, which carries with it *λείπειν* or a verb very close in meaning. Whether the epigram ended with *κατέλειπεν* or even *μνέμεν ἀρετῆς καταλείπον* we cannot say.

Here is the whole of the epigram set out with our restorations: <sup>50</sup>

[Καλ(λ)ίμαχος μ' ἀν]έθηκεν Ἀφιδναῖο[ς] τῷ θανάτῳ;  
ἀν[γέλον δὲ] σπᾶτον ὅτι Ὀλύμπια δόματ' εἰχουσιν,

<sup>49</sup> These observations do not apply to the use of the present participle, which is often governed by the fact that the aorist participle would imply that the action of the participle took place before that of the main verb. This is shown, for example, in the epigram (Hiller 30 = Tod 20):

Ἑλλάδι καὶ Μηγαρέσσιν ἡσίδερον ὄμαρ ὄξεν  
ἡμεῖσι σπᾶτον μοῖραν ἐκέρχυνθαι.

where the straining after the goal and the doom occurred together.

<sup>50</sup> As an alternative I ought to give, perhaps, the following version, which has the advantage of avoiding

the hiatus and the possibly rather forced construction of *ἐσπεράσων*:

[Ἦς(ς)πέσας πολέ]μαρχο[ς] Ἀθηναῖον τὸν ἀγῶνα;  
τὸν Μα[ραθῶν], παυ[έ]λ(λ)ένου ἀν[γ]ομ[ο] ἐσπεράσων[τ];  
πασίν Ἀθηναῖον μν[έ]μεν ἀρετῆς καταλείπον[τ].

(I owe *παυέλ(λ)ένου* to Hugh Lloyd-Jones; for the use of *ἐσπεράσων* see Eur., *Troades* 1030). '... who ... brought honour upon the name of all the Greeks, leaving to the children of the Athenians the memory of his *arête*.' However, for several reasons, including those given on pp. 146 and 152, I cannot persuade myself that this version is to be preferred.

[Ἰὸς(σ)τέσας πολέ]μαρχο[ς] Ἀθηναίου τὸν ἀγῶνα :  
τὸν Μα[ραθῶνι] πρὸ ἑ[λ]λ[ή]νων, θυ[οι] ἐστεφάνωσεν :]  
καισίν Ἀθηναίου, μν[ήμεν δ' ἀρετῆς κατέλειπεν].

## V

The height of the column which carried the statue dedicated by Callimachus on the Acropolis can be estimated to have been, together with its base and capital, about two and a half metres.<sup>51</sup> The epigram which survives, and which was engraved along the length of the column, was therefore at a convenient level for the spectator to read. Moreover, the unique feature of the column, namely the two flutings cut into an otherwise plain shaft, must have aroused his attention just as much as it does today. There were numerous column dedications on the Acropolis,<sup>52</sup> and most of them, consulting the convenience of the reader, had their inscriptions placed on the column; but these inscriptions were either on the round surface, often smoothed, if the column was plain, or in the channel of the flutings, if the column was fluted. If we may trust the evidence of what has survived, the Callimachus dedication was the only one to depart from this norm by having two inscribed flutings while the rest of the column was plain.

The theory that the surviving epigram is a secondary inscription does not by itself explain this unique feature, but it enables us to speculate about the reason.

Though most of the column dedications have the inscription on the column, not all have it so,<sup>53</sup> and it is quite possible that, as we suggested earlier, the original dedicatory inscription had been placed on the base, leaving the column entirely free. If that was so, there can be little doubt that the purpose of engraving the new epigram within two flutings was to attract attention to the addition. On the other hand, it may well have been that the original dedicatory inscription was on the column within a smoothed area on the very spot where the flutings are now. In that case, the present flutings have removed all traces of the earlier inscription. But even so, it is arguable that the desire to make the change conspicuous played its part, because it would have been possible to erase the first inscription and substitute another one without going to the length of cutting the flutings.

<sup>51</sup> The letter space of the restored epigram would take up about 1.97 m. The height of the whole monument, statue included, must have been about 3.50 m. That was very considerable for a dedication (cf. Raubitschek, *BSA* XL (1939-40), 22-23 for the height of some other dedications).

<sup>52</sup> *DAA* p. 3 ff. should be consulted for numbers and examples of types; see also *BSA* XL (1939-40), 28 for the type of unfluted column.

<sup>53</sup> *Scen.* 15. One inscribed column base has survived, *DAA* 58.

The epigram, as we have restored it, makes the proudest boast a Greek could make, to have brought credit upon his city and to have acquitted himself with honour. If Wilhelm's supplement, adopted by us, is right ([ὅς(σ)τέσας πολέ]μαρχος . . . τὸν ἀγῶνα), then Callimachus' title to this claim was that he, as Athenian Commander-in-Chief, was responsible for the battle dispositions which led to the victory.<sup>54</sup> This positive claim, so different from the standard praise of a man's bravery,<sup>55</sup> makes one inclined to agree with Jacoby, who saw in the second line evidence for 'a clash of aspirations after the battle, as to whom the victory was due'.<sup>56</sup> Jacoby rightly saw that the second line did not belong to a dedicatory inscription. It did not give the reason for the dedication, but was a 'footnote' on Callimachus. He therefore adopted Hiller's view against Wilhelm and Raubitschek. In this he judged correctly, for Hiller, on this point, was nearer the truth than his successors.<sup>57</sup>

The striking fact of a posthumous addition to a dedication, the positive claim to have been the person responsible for the victory, the conspicuous way in which this claim is displayed on the column, makes one wonder whether our epigram was not intended by Callimachus' friends to point against pretensions of Miltiades which may have become loud immediately after the battle.<sup>58</sup> If so, we know that this protest was ineffective. Callimachus' bravery and his heroic death, which received only conventional or implied mention in the

<sup>54</sup> The claim is considerable. There are few documents with which our inscription can be compared, but for the Homeric meaning of *στῆσαι* as a general's function see the examples collected by Jacoby, *Hesp XIV* (1945), 184 n. 105 (cf. also the reflection of the Homeric *κομιστὴ* (II, 554) in the Eion epigrams).

<sup>55</sup> For examples see pp. 150-1.

<sup>56</sup> *Hesp XIV* (1945), 158 n. 8. Cf. also *Minerasyne Ser. 3, XIII* (1947), 31.

<sup>57</sup> Cf. pp. 142-3. I hope that the difference between my view and that of Hiller is clear. I do not suggest that the present inscription contains any elements of the original dedicatory inscription at all. All five hexameters, as we have them now, belong to the secondary inscription (cf., however, n. 12 *ad fin.*). This dedication was put up by Callimachus, who . . .

<sup>58</sup> These pretensions may have been justified. We cannot now assess fairly the respective parts played by the two personalities, especially since we know nothing about Callimachus previously, except that he must have been wealthy enough to dedicate the quite distinguished marble statue identified by Raubitschek.

There is, indeed, another fragmentary column, IG I<sup>2</sup> 767 (no. 1), fluted all round and of *poros*, which once carried a dedication and still preserves the following inscription:

Κ[αλλιμαχ]ος  
στῆσαι

The date is near the turn of the century—after it rather than before, despite one or two old-fashioned forms.

The date of the inscription would therefore favour

the view that we have here an earlier dedication by the same Callimachus, but the use of *στῆσαι* in the second line does nothing to support it.

Certainly it was Miltiades who, as head of a great noble house, was responsible for the decree under which the army marched to Marathon (Aristotle, *Rhet.* III, 10, 3 (1411a); Schol. *ad Demosth. de Fals. Leg.* 438, 16), and who also, by his initiative, forced the decision to fight there (Herod. VI, 109). On the other hand, careful reading of the Herodotus passage shows that the polemarch had overriding, if not sole, powers to make the decision, and ■ he made it against the majority vote of the Council of Generals his action, however influenced, was all the more commendable (cf. Berve, *Miltiades* 80). Miltiades' position was only that of one amongst ten, and he was liable to be overruled by the majority. But if Callimachus had supreme powers of decision in council, he will have had supreme command on the field, too, and therefore the now hardly intelligible surrender of the *πρωτογενῆς τῆς ἡμέρας* by each general to Miltiades can scarcely have meant more than that Miltiades was permanent Second-in-Command. The battle disposition may well have followed Miltiades' plan (he had had experience with the Persians), but final authority must have come from Callimachus. Aristot. *Adm.* 22, 2 confirms this view of Callimachus' position at the time, as does Callimachus' position on the right wing (Herod. VI, 111).

Both claims, therefore, that of Miltiades and the one in favour of Callimachus, were well-grounded, but not unnaturally the claims of one of the great leaders in the state, who also seems to have been the driving force behind the battle, were stronger from the beginning.

epigram, became legendary and canonized; his responsibility for the victory, the gravamen of the epigram, was forgotten and attributed to Miltiades. In the Stoa Poikile Miltiades as strategos led the Athenians, pointing out the enemy, whereas Callimachus was shown mortally wounded, but fighting on in supreme heroism.<sup>59</sup> This version of Callimachus' part, hallowed by the great painting, became current with later writers and a commonplace amongst rhetoricians.<sup>60</sup> Herodotus still gives Callimachus the decisive vote at the



IG I<sup>2</sup>, 767. Cf. p. 161, n. 58.

council of war, but his account might make us think that the tactical disposition of the battle was all Miltiades' work.<sup>61</sup> Against this version, which may well have gained currency immediately after the battle, and not, as is usually thought, as the result of Cimon's ascendancy later, the epigram added on the column of an earlier but prominent dedication of Callimachus seems to have been a protest. It claimed due credit for the polemarch as polemarch.

Stress is laid, in the epigram, on the fact that Marathon was fought on

<sup>59</sup> For Miltiades cf. e.g. Aeschin. in *Cler.* 186 and Schol. ad Aristid. III, 566:

συνεχώρησεν αὐτῷ (ὁ δῆμος) πρῶτον γραγεῖναι παρακα-  
λᾶν τοὺς στρατιώτας. (Aeschines.)

Ἦν γὰρ ἐν τῇ ποικίλῃ στοᾷ γεγραμμένος ὁ Μιλτιάδης  
ἐκείνους τῆς χειρὸς καὶ ὑποδομῆς τοῖς Ἕλλησι τοὺς βαρ-  
βάρους Μάραν ὄρειν κατ' αὐτῶν. (Schol. ad Aristid.)

For Callimachus no direct evidence is available, but there are allusions in various writers to the fact that his dead body was held upright by the number of spears

that had pierced it, so that even in death he appeared to be fighting (cf. e.g. Himerius, X, 2 and Suidas s.v. 'Μιλτιάδης, Ἀθηναῖος τόπος'). It is a fair inference from the words used by Himerius that this *topos* was taken from a motive in the painting in the Stoa. The literary evidence for the painting in the Stoa is collected and discussed by C. Robert, 'Marathonsschlacht' (18 *Hell. Winkelmannsprogramm*). Later discussions add little of importance to our enquiry.

<sup>60</sup> E.g. Plut. *Moral.* 305 b, c; 347 d; Himerius, *or.* II, 21; Polemon, *or.* II *passim*.

<sup>61</sup> VI, 110; cf. also n. 58.

behalf of all the Greeks. This is of interest, because we find the same feeling in the first of the two Marathon epigrams:<sup>62</sup>

Ἑλλάς[δά μ]ε πᾶσαν δοῦλο[ν ἔμαρ ἰδέν].

In this awareness the first Marathon epigram differs from the second, which is only interested in the danger as it had affected Athens. The difference between these two points of view has often been the subject of comment, and Jacoby<sup>63</sup> has suggested that later dissatisfaction with the first poem on the score of its too catholic view may have been the reason for the addition of the second epigram. The Callimachus epigram shares the sentiment of the first and original Marathon epigram.

Both the Callimachus and the two Marathon epigrams are securely dated between 490 and 480.<sup>64</sup> Hence, the arguments heard in the past,<sup>65</sup> that until after the invasion of Xerxes it would not have been seen that 490 was a year of crisis not only for Athens but for the whole of Greece, need no longer be given serious consideration. It is, however, of some importance in estimating the strength of the Athenian claim to leadership in the negotiations before 480, to realize that both publicly and privately Athens' achievement was proclaimed in terms of having by her own efforts, unaided except by the Plataeans, saved the whole of Greece.<sup>66</sup>

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<sup>62</sup> See n. 2.

<sup>63</sup> *Hesp. XIV* (1945), 177/8; cf. Bowra, *Greek Lyric Poetry*, 356.

<sup>64</sup> The *terminus post quem* for the Marathon epigrams is 490; the *terminus ante quem* is 480, the date of the sack of Athens, which must have seen the destruction of the monument, because neither epigram is found in any of the later collections, and the newly-found Agora fragment shows a great freshness of surface, arguing a short period of intact existence for the monument (cf. *AJA XLIV* (1940), 483). It is unreasonable to suppose that utter disaster could have overtaken an important public monument shortly after 480, when so plausible an occasion can be found in 480.

This line of argument is reinforced to some extent by consideration of the Hekatompedon inscription (IG I<sup>2</sup> 3/4), the attribution of which to the engraver of the first Marathon epigram by Wilhelm (*AM XXIII* (1898), 489 ff.) has been confirmed by the new Agora fragment (see n. 2), which gives more scope for the comparison (cf. *Anz. Wien* 1934, 108 ff.). The style of the Hekatompedon inscription is too close to that of the Marathon epigram to allow a great interval between the two. If anything, it is later (for a possible earlier inscription by the same hand see IG I<sup>2</sup> 645 + 497 = *DAI* 58; cf. *JHS LX* (1940), 53 and our n. 58). Now there can be little doubt that Kirchhoff's restoration of the archon of 485/4 in both inscriptions, *πρ. ἐπ. Φ[ιλοκράτος] ἀρχ[οντος] ἐν IG I<sup>2</sup> 3, 16 and ἐπ. Φ[ιλοκράτος] ἀρχ[οντος] ἐν IG I<sup>2</sup> 4, 26, as the only name that will fit, is right, seeing that, with two exceptions, we know the eponymous archons for every year in*

the eighties and have a complete list for the succeeding years. Of the two exceptions, 486 will not affect any chronological conclusions regarding the Marathon epigrams which we may base upon the Hekatompedon inscription; the other year, 482, would affect them, but the chances that the missing archon name also fulfilled the conditions required by the stoichedon inscription are small. On the other hand, a pre-490 date for the Hekatompedon inscription would argue *a fortiori* a pre-480 date for the Marathon epigrams. Though there are some gaps in the archon-list of the early nineties, and in 493, if we accept a late archonship for Themistocles, it is highly improbable that the Hekatompedon inscription belongs there. The still earlier date recently argued again by Miss Guarducci (*Ann. N.S. III-IV* (1941-2), 12 ff.) is untenable.

<sup>65</sup> e.g. Hüller, *Hermes LXIX* (1934), 205.

<sup>66</sup> There is another epigram expressing much the same point of view, of which the best version occurs in Lycurgus, in *Laeral*. 111, where it is quoted side by side with the distich on the Spartan dead at Thermopylae (Hüller 12 = Diehl ■ (90)):

Ἑλλήνων προμαχόντες Ἀθηναίων Μαραθῶν  
χρυσόφορον Μῆδων ἐσθλότερον θύσαντες.

The date and nature (certainly no epitaph) of the epigram is uncertain. It is in structure like *A.P. VII*, 257 (Diehl 119 (101)):

Παῖδες Ἀθηναίων Περσῶν στρατὸν ἐξολόντες  
ἤρσαν ἀργαλέον πατρίδι βουλομένη,

which, too, seems to refer to Marathon.

The epigram quoted by Lycurgus has been dated



*Postscript.* Professor Raubitschek has very courteously sent me the following interesting version, which avoids the difficulties urged in the text against former restorations:

[τόνδε με δῆμος] ἔθηκεν Ἀφιδναίο[ν] τάθευαίαι:  
 ἀν[γελον δὲ] ἀνάτον, ὅι' Ὀ[λύμπια δόματ'α] ἔχουσιν.  
 [Καλῖμαχος πολέ]μαρχος Ἀθηναίων τὸν ἀγῶνα:  
 τὸν Μα[ραθῶνι πρὸ Ἑ]λένων οὐ[μαστόν] ἔθηκεν:  
 παίσιν Ἀθηναίων μυ[ῆμα λιπὸν ἀρετῆς].

Such a version does away with the need to assume a secondary dedication. For that reason, however, it does nothing to explain the singular feature of the two flutings on the otherwise plain column.

after the period of the Persian wars. This may well be true, but the arguments adduced for this view are inconclusive. Suidas, s.v. 'Ποικίλη στοά' is not sufficient evidence for the theory that the epigram stood under the painting in the Stoa Poikile. The text can be interpreted quite differently.

Another argument, used by Friedländer (*Stud. Ital. Fil. Class.* N.S. XV (1938), 98), that the phrase Ἑλλήνων προμαχοῦντες was not possible until the events of 480 and later had given the perspective, based itself upon the belief that there was a case for putting the Marathon epigrams after 480. Once that has gone (see n. 64), Friedländer's view becomes as untenable for the epigram

quoted by Lycurgus as Hiller's view (see n. 65) is for the Marathon epigrams. We find, then, that no reason has as yet been put forward which is sufficient to prevent us from regarding both epigrams, Lycurgus, in *Leocrat.* 111 and *A.P.* VII, 257, as contemporary with the Persian wars and possibly earlier than 480. Neither, however, is there any cogent positive evidence for an early date (cf. also Jacoby, *Hesp.* XIV (1945), 160, n. 17). T. J. Dunbabin reminds me of Pindar, *Pyth.* I, 75, referring to the battle of Cumae (474 B.C.):

Ἑλλὰς ἐξέσωσε βασιλεὺς Κούμιος.

## A KILN SITE AT KNOSSOS<sup>1</sup>

(PLATES 12-16)

In March 1937 a peasant digging on the lower south-east slope of Monasteriako Kephali, by Knossos, discovered various sherds which included a few kiln wasters. It was clear that there had been a kiln site near and it seemed best to try to find it at once and so anticipate its being accidentally destroyed. Mr. Hutchinson, Mr. Dunbabin and a few students, including myself, supervised a brief excavation. A short description of the remains of the two kilns discovered appeared in the *JHS* summary of that year's excavations.<sup>2</sup> Before the war I had intended to publish a further short account of the site and of some pottery connected with it; and in spite of the loss of some relevant notes and illustrations in the intervening years it still seems worth recording such data as I have.<sup>3</sup>

The area (FIGS. 1A and B and 2) has been so disturbed by ploughing and erosion, quite apart from its vicissitudes in ancient times, that little can be said about the kilns themselves to amplify the *JHS* account. Of each only the fire-chamber is preserved and that only in part. The earlier of the two (A in the plan) is circular and has a doorway facing eastward down the slope, approached by a short entrance-passage. Inside, there are two short, irregular walls and a roughly circular-shaped support; these must have supported the floor of the upper chamber in which the pots were placed. Small fragments of baked clay and of large coarse pithoi are all that remain of this floor.<sup>4</sup> The floor of the fire-chamber itself was of stamped earth. There seems to have been an earlier doorway, also with an entrance-passage, facing north-east and later blocked by a stone wall.<sup>5</sup> The sides of the fire-chamber were partly cut out in the hillside and partly of rough stones, and were lined with mud. Beneath the level of the floor a Minoan level was soon reached; the only sherds found in the walls were very small fragments of coarse pottery; consequently the only evidence of date is the pots found actually in the layer of

<sup>1</sup> My thanks are particularly due to Mr. Hutchinson and to our late foreman, Manoles Akournianos, for help at Knossos; to the Agora staff, especially Mr. Homer Thompson, for help and advice and for allowing me access to all their material; to Mr. Ashmole for his interest and his helpful suggestions; and to the late John Pendlebury who took many photographs for me, including my PLATES 13, 14 A and B, 15, C D and E, and FIGURES 2, 16, 17, 20, 21, 23, 25.

<sup>2</sup> *JHS* 1937, 138, fig. 10.

<sup>3</sup> Mr. Piet de Jong tells me that almost all the pottery

has now disappeared.

<sup>4</sup> In present-day kilns at the village of Thrapsanos in Crete the floor is built, together with the central support, of mud, unfired brick and large sherds; and the whole is then fired to a single compact mass by lighting a fire underneath.

<sup>5</sup> Perhaps the draught in the fire-chamber was originally unsatisfactory. Cf. the fifth/fourth century kilns destroyed when the Kerameikos Museum was built. (*AA* 1937, 185, figs. 4 and 11. One kiln is built exactly above another but at right angles to it.)

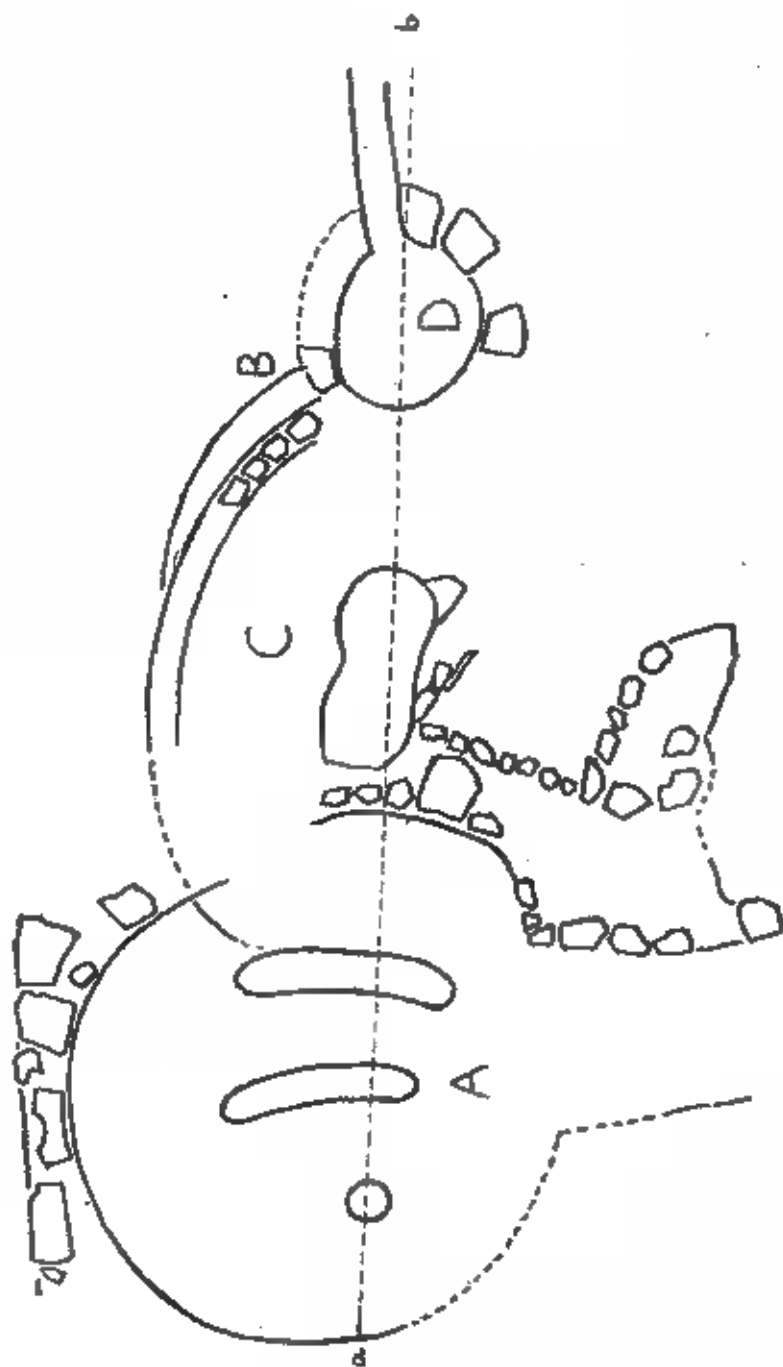


FIG. 1A.—KILN SITE AT KNOSSOS, PLAN.

burnt earth which covered the floor.<sup>6</sup> These were a quantity of small olpai and lekythoi and a few small cups, many of them wasters, which must have fallen into the fire when the floor collapsed. Though not exactly dateable

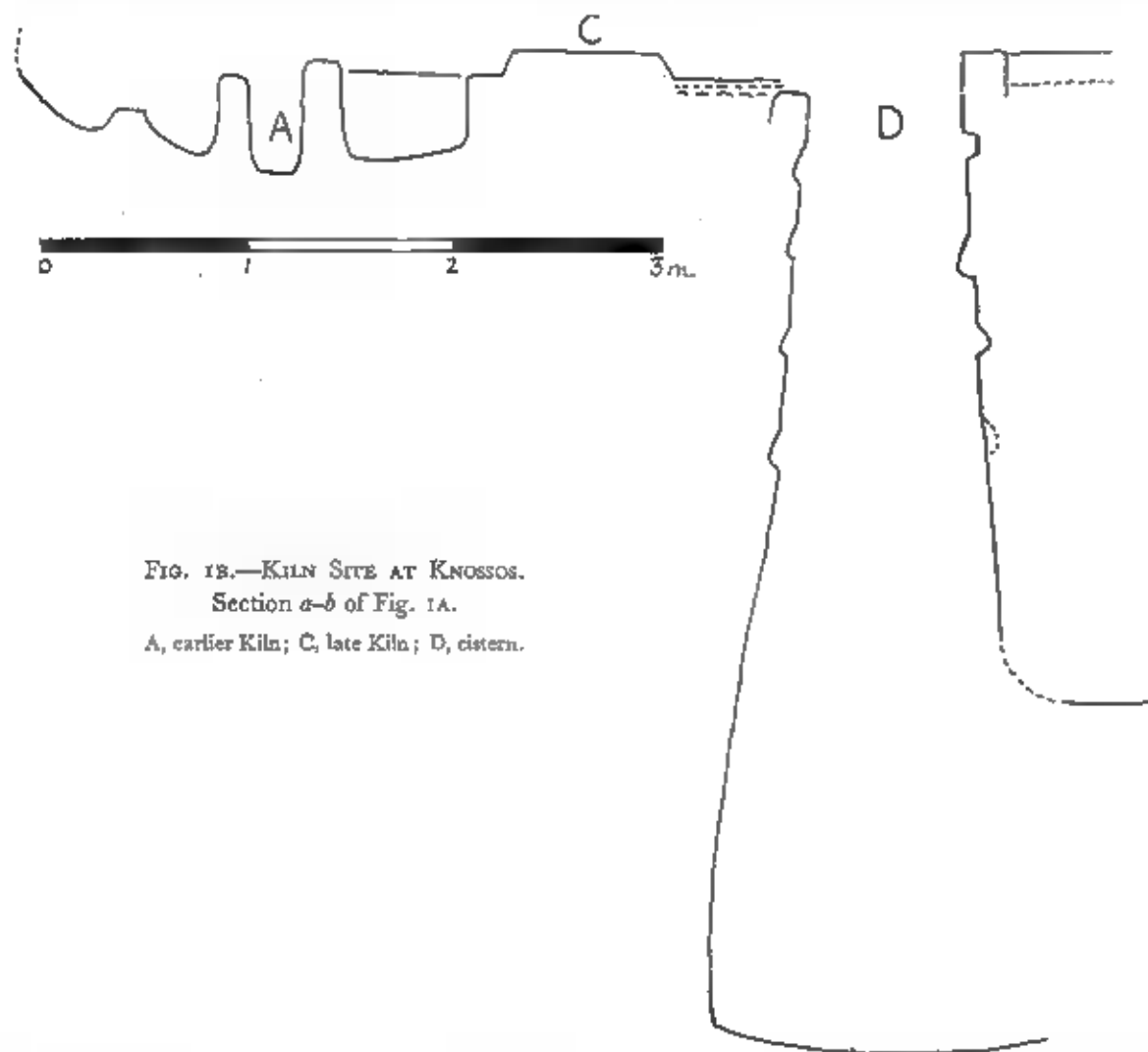


FIG. 1B.—KILN SITE AT KNOSSOS.

Section *a-b* of Fig. 1A.

A, earlier Kiln; C, late Kiln; D, cistern.

they seem by their shape to have been made about the beginning of the fourth century.

The later kiln, C, overlaps the earlier, at a slightly higher level. It is oval with a central support shaped roughly like a figure 8. Its western wall alone is preserved, and that to a height of only a few centimetres; of this wall there

<sup>6</sup> Besides those found in the kiln itself, many were brought in from the surface soil of the area.

were two versions, an earlier of which only the inner mud facing remains, and a later, fitting exactly inside the earlier, at least partly of stones and again faced with hard mud. At the northern end are traces of a wall of an earlier kiln, B, slightly different in curve. Such rough kilns must often have needed rebuilding; the upper chambers may even have been deliberately demolished for the removal of the pottery.

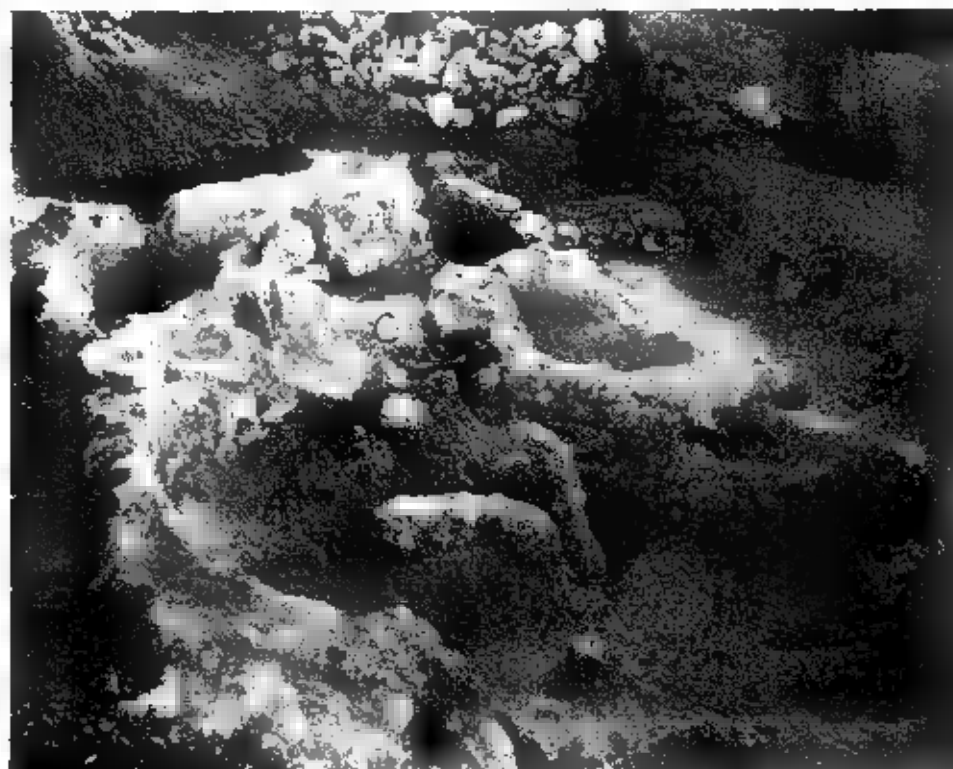


FIG. 2.—GENERAL VIEW OF KILN SITE.

A little over a metre north of the round kiln and cutting across the north end of the oval kiln is a cistern, D. In its present state it is a little more than four and a half metres deep. At the top it is about 65 cms. wide and it widens downwards. At the bottom it opens into a passage leading northwards; but the passage was not cleared as this would have involved considerable propping. The top part of the cistern is faced with very irregular courses of stones; the lower part is cut out of bedrock and lined with hard white plaster. For some distance down there are handholds on opposite sides of the shaft. There are in the cistern no fragments of pottery of the type found in and round the first

kiln. The buckets from the floor of the cistern are of Hellenistic type and the main fill apparently, as will be seen, second century.

The relation between the oval kiln and the cistern is not absolutely clear. The small part of the kiln floor which remains does not extend as far as the cistern; the hard mud inner facing both of the earlier wall of this kiln and of its predecessor projects for a minute distance above the remaining top courses of the cistern. But in view of the fact that the only pottery found under the oval kiln was of the type found in the round kiln and in the surface soil, and that there were no recognizably Hellenistic sherds, it seems that the cistern is, as one would expect, later, and that the projecting part of the wall must have survived by coincidence in a place where there was a gap between stones of the cistern wall.

Whatever the date of the oval kiln, it is likely that there was a pottery in this area for some time. It will be seen that the pots found in the cistern were also probably from a potter's workshop; and fragments of wasters of various kinds are common in the surface soil for some distance round. (PLATE 16, F, shows a casual selection.)

#### THE POTTERY FROM THE KILN

The pottery found in the kiln is of three types:—

##### 1. *Small Olpai.*

PLATE 12, A. Average height about 9 cms. Flaring lip; ribbon handle attached inside lip; dark glaze. The specimens found are of three slightly differing shapes: one with-



FIG. 3.

out a foot, another with a sharply offset foot, and a third with a more bulging, less geometrically-shaped body which narrows gradually into a foot. The glaze has usually turned grey and rough; in some examples it is a glossy dark red. Some specimens have become twisted and lop-sided with mis-firing (FIG. 3). About seventy occur, including those from the surface.

*Olpai* of roughly this size and shape were in use for a long time. Vanderpool, *Hesperia* XV, 275, mentions one from a late sixth/early fifth century well. Many occurred at Sciatbi (Alexandria) (Breccia, *Necropoli di Sciatbi*, pl. LI). Ours seem on the whole to be most like those shown in *Olynthus* V, pls. 162-5, nos. 666-714, dated in the fifth and fourth centuries. Robinson compares his 666 (which is not, however, exactly like any of our three profiles) with a fifth century example from Rhitsona (*BSA* XIV, pl. XIII g). There are other examples from many sites, e.g. Rhodes, Samos, Smyrna, and Aeolian Larisa.

## 2. *Lekythoi*.

PLATE 12, B. Height ranges from 12 to 18 cms. Elongated ovoid body which merges into a straight- or slightly convex-sided lip; very narrow echinoid foot; ribbon handle. Unglazed except for reddish lines on shoulder and near base. (But one has rays very roughly painted on the shoulder, as though for a joke.) Very coarse fabric. Over a hundred occur, including those from the surface.

Coarsely made pots such as these are, of course, liable to be purely local and to develop without outside influence. Ure, however, illustrates (*Sixth and Fifth Century Pottery from Rhitsona*, pl. XVI) a *lekkythos*, also unglazed, which, probably quite accidentally, resembles ours in its unusual straight-sided neck. His example has, however, a wider foot. It comes from a grave which he dates between 440 and 430 B.C. He mentions similar *lekkythoi* in Thebes Museum from the Thespian Polyandron of 424 B.C.

## 3. *Little Cups*.

PLATE 12, B. Ht. c. 5 cms. Very coarsely made, with string mark on bottom and thick ribbon handle. Nine occur.

## POTTERY FROM THE KILN SURFACE

Packed in among the topmost of these small vases and obviously buried at the same time were part of the rim of a large plate and fragments of a bowl. They show no signs of mis-firing and were probably not in the kiln when it collapsed. Other fragments of these two pots and a quantity of apparently homogeneous pottery were found in the surface soil and under the later kiln. Now the surface of the area is, as I have said, so disturbed that the various isolated sherds in it can have little value; on the other hand the pottery in question is relatively so plentiful and represents so few and so definite types that one may justifiably regard it as a group, even though it has no definite context. In the circumstances, it seems very likely to be contemporary with the kiln itself.

Usually the individual pots were, as one would expect, very fragmentary, and it was not always possible to obtain a complete profile of a particular type.

## I. GLAZED WARE.

### 1. *Cups with flared lip*.<sup>7</sup>

PLATE 13, A, b. (Handle restored.) Ovoid body, narrowing to very short stem; wide foot; ribbon handle attached inside rim. The underside of the foot is very accurately

<sup>7</sup> I have not recorded restorations except when these are not certain. They are almost always obvious in the photographs.

turned, leaving, though not in all examples, a knob in the centre. Fragments occur of the lips of four or five.

## 2. *Cups with offset rim.*

PLATE 13, A, c. As above except for the rim. Fragments of very many, but not enough of any to make a complete profile. (The sherds break small as the fabric is thin.) The example illustrated was found in a mixed context some distance away, but is obviously of the same type.

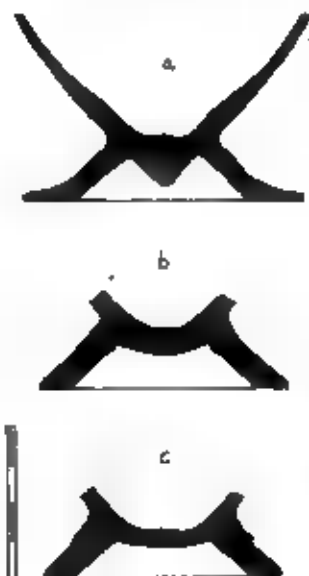


FIG. 4.



FIG. 5.



FIG. 6.

There are twenty-three bases (FIG. 4) which must have belonged to one or other of these types. One, nos. 4a and 5, must have been used by a potter as a trial piece, since its broken edges and the edges of a hole bored through it are covered with glaze. This supports the view that this group of pottery, too, may be in part debris from a potter's workshop.

## 3. *Bell-kraters.*

PLATE 13, A, a. Ht. 22 cms. Dark red glaze. Though provincial vase-profiles tend to develop along independent lines (e.g. Paestan bell-kraters) the swinging outline, slightly projecting lip and plain foot of this krater suggest a late fifth or early fourth century date. (Cf. e.g. Trendall, *Frühitaliotische Vasen*, Pl. 21 ■ (early fourth century) and Tillyard, *The Hope Vases*, Pl. 25, nos. 151 and 152 (about 410 B.C.).)

Fragments of four others, all larger and with darker glaze. The lip profile of one, with a diameter of 30.5 cms., is as sketch, FIG. 6.

## 4. *Miniature Bell-krater.*

PLATE 13, A, c. Foot missing. Vertical handles close against body. Red glaze. One example only.



5. *Large Bowls.*

Profile, fig. 7. Shallow, with curving profile and low ring foot. Parts of nine others.

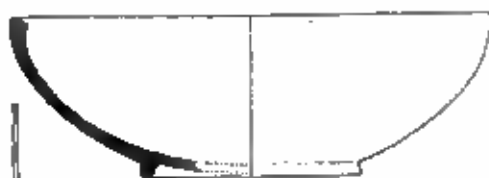


FIG. 7.

## II. COARSE WARE.

1. *Large Plates.*

FIG. 8 and PLATE 13, A, g. Diam. 43.75 cms. Rim has straight edge and curved upper surface, with incised line near edge. Small raised circle at centre; another, a little larger, on under surface. Red glaze on outside edge of base and of rim, and inside central ring, except for small reserved circle in the middle. Four very roughly drawn branches with leaves radiate from the centre. Part of rim of another (PLATE 13, A, f) with diameter of 38.5 cms. Rim entirely red. Inside rim, band of decoration 3 cms. wide, of which branch and flower are preserved. Inside this band, another band of red.

Rim of another, diam. 42 cms. Red band at edge.



FIG. 8.

2. *Jugs with trickle decoration.*

PLATE 13, A, d. Ht. 33.25 cms. Low echinoid foot, slightly turned underneath; ovoid body; straight neck, not offset; no spout; thick ribbon handle meeting neck at right angles. Dark red glaze on neck and shoulder, trickling down under handle.

Fragments occur of at least seven jugs of this type. Of three handles found, two are as above, the third attached outside neck.

3. *Miniature Bell-krazer.*

One ex. only. Diam. 13 cms. Foot and handles missing. Larger and more elongated than completely glazed example, and with more gradually flaring lip. Black glaze outside at top (probably dipped into the glaze).

4. *Hydriai.*

PLATE 12, E. Low echinoid foot, wide oval body; two horizontal handles. Fragments of others show that there was also a vertical handle and that the neck was straight with a slightly projecting echinoid rim. Clay normal, covered with cream slip. The decoration of the specimen illustrated, painted in red glaze, consists of: narrow line above foot, broad line below handles, broad line on shoulder with two narrow lines above it and one below. At base of neck, a band from which hangs, in front, a row of petals. On each horizontal handle, a broad band prolonged into upward-curving lines. The detached fragment

shown belongs below the vertical handle and has an accidental splash on it. Fragments of several others occur, some larger. PLATE 12, D shows some sherds with petals.

5. *Household Bowls, large.*

PLATE 12, F. In both, handles are restorations based on fragments of other such bowls. Diameters of both c. 43 cms. Very low ring base (*cf.* large plate). Sides curve up from bottom without any angle, rim curves out slightly and is thickened; its edge is angular. Horizontal handles attached to edge of rim. Red glaze inside. At least eight, some a little smaller. One has two grooves under rim.

6. *Household Bowls, small.*

(a) FIG. 10; profile, FIG. 9 A. Low ring foot, curved sides, flared rim which thickens at edge. Thick ribbon handles, rather rectangular in plan, joined along edge of and

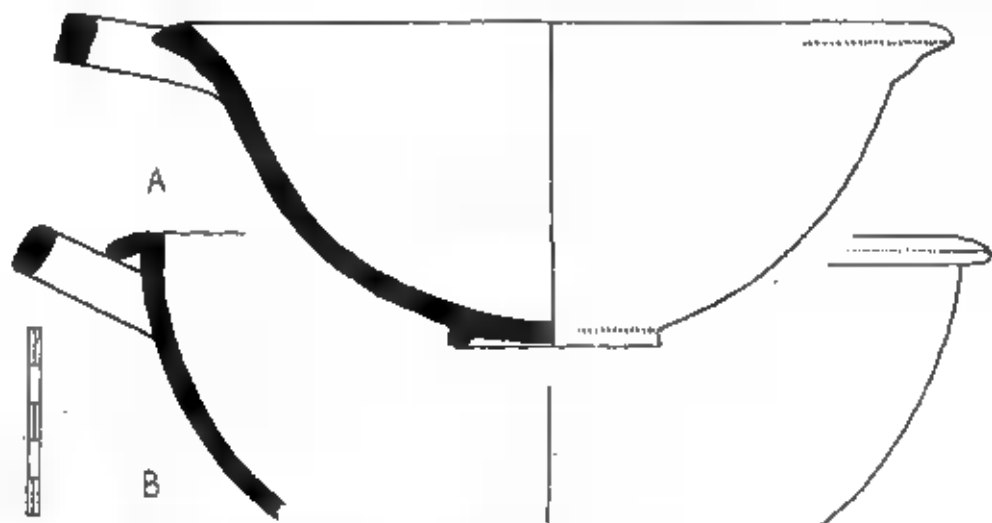


FIG. 9.

under rim. Red glaze usually only on handles and on rim adjoining them; sometimes all round rim. Parts of several exx. occur.

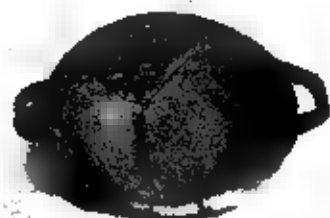


FIG. 10.

(b) Profile, FIG. 9 B. As above, but body profile more bulging, and rim turns down sharply. Thick ribbon handles, rather triangular in plan, attached under rim. Red

glaze on handles and almost always along top of rim, sometimes allowed to trickle down outside the bowl. Parts of several occur.

### III. COOKING POTS.

The clay is usually rather light in colour, orange to purplish, and rather gritty. It is very brittle. Those pots of which enough is preserved show signs of use. There is nothing to show whether they are imports or local products; though the coarse, gritless type seems too roughly made to have been worth importing.

(a) PLATE 13, A, h. Pot without handles. Greatest diam. 16 cms. Base conjectural. Side curves in towards rim, which is vertical, so that a lid could fit over it.

(b) Bulging pot with vertical ribbon handles. Profile, FIG. 11. Rim turns out sharply, with small ledge inside for lid. Upper attachment of handles is not preserved. Fragments of several others, one without rim for lid.



FIG. 11.

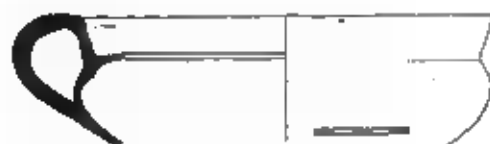


FIG. 12.

(c) Shallow pot with vertical ribbon handles. Profile, FIG. 12. Diam. 22 cms. Deep, nearly vertical rim; wide ledge for lid. Clay almost free from grit.

Fragments of two others.

(d) Lids, various. Rim fragments occur of one which is 28.5 cms. in diameter, very thin in fabric and of dark reddish-purple clay. Several are very roughly made, about 15 cms. in diameter, with straight profiles and flat-topped knobs. The clay of these is usually fairly free from grit.

### IV. LAMPS.

#### 1. Attic.

(a) Nozzle only, as in Broneer \* no. 102, pl. 3. Rim meets sides in a sharp angle, as in Broneer, profiles 28 and 29. Thick walls; good black glaze. The lamp belongs to Type 6 (appearing from about 500 a.c., and commonest about the middle of the fifth century).

(b) PLATE 12, C, on the right. Diam. 6.75 cms. Profile (from a sketch), FIG. 13 A. Base low, underside turned. Low, curving sides. Loop handle, broken away. Nozzle broken; it was fairly long. Good black glaze except on bottom. It resembles Broneer no. 64 but the nozzle of ours was longer. It belongs to Type 4, which continues from the late sixth to the fourth century; the base and good glaze would place it in the fifth. That so much of *b*, at least, is preserved suggests that its presence is not merely fortuitous but that it was in use at the same time as the local types. Attic lamps would obviously be longer-lived because of their superior fabric."

\* Corinth, IV, 2, *The Terracotta lamps*.

2. *Local.*

PLATE 12, C. (The three to the left.) Profile, FIG. 13, B. Parts of five were found. These lamps are wide and shallow, have no base, a narrow very flat rim and a rather sharp shoulder. The horizontal loop handles are more angular than in Attic lamps. The nozzle is short. The fabric is very thin and usually only the nozzle is glazed; consequently they are extremely friable. The combination of these characteristics makes

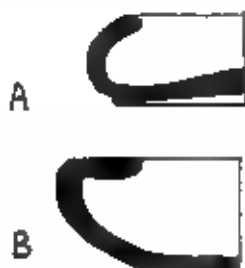


FIG. 13.  
(Scale 2 : 3.)

them difficult to parallel with Broneer's Attic and Corinthian types, though they are closest to Types 4 and 6. Lamps of much this type were found at Olynthos (*Olynthus*, V, pl. 197); but there they were in a late sixth century context. On the other hand, Mylonas (*AJA* XL (1936), 415) shows lamps very like ours, found at Eleusis in a deposit dating from the fourth century onwards.

It seems therefore that one may tentatively assign the group as a whole to the late fifth century, the date suggested by the profile of the bell-krater. The pottery from the kiln itself might also well be of this date, so that there would be no objection to regarding the two groups as contemporaneous.

## THE CISTERN

On the floor of the cistern were found fragments of several clay buckets which must have broken while actually in use and fallen down the shaft; there were also pieces of a very large, shallow basin. These fragments were found in a thin layer of dark earth which seems to be mud which had collected at the bottom of the cistern. Immediately above this layer of earth was the main deposit, a metre of earth thick with Hellenistic pottery which is remarkably homogeneous, and was probably all thrown in at the same time. The pots seem to have been first collected in a dump outside, as a few fragments belonging to them were found scattered in the upper fill of the cistern; these must have been left lying about and shovelled in with the earth afterwards. Apart from these, the relatively very few sherds in the upper fill were chiefly

Hellenistic and seem mostly to be roughly contemporary with the main deposit;<sup>9</sup> there were a few Minoan and about twenty proto-geometric or geometric sherds and a Minoan lamp. There was also a small mould for a rosette (FIG. 14) perhaps for moulding the *emblema* inside a Hellenistic bowl. No *sigillata* ware of any kind, though it is common at Knossos, was found in the cistern, nor were any moulded lamps; which suggests that the whole cistern was filled up soon after the main deposit was thrown in.

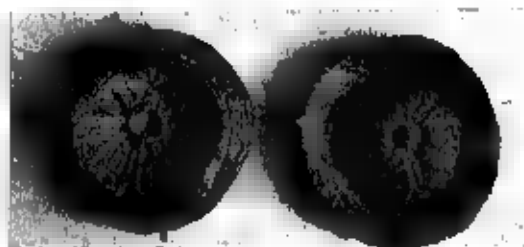


FIG. 14.

The bulk of the main deposit obviously forms a homogeneous group (there are usually several examples of each type, and only one type of each class of pot: cup, mug, plate and so on), so that it seems worth publishing in the hope that some of the types may presently occur in a more dateable context. The shape and glaze of the pots and the presence of a few imports makes a probable and approximate dating possible. So much Hellenistic material is still undated that the publication of any closely associated group may eventually prove useful.

No wasters were found in the cistern, but it is possible that the main deposit was largely the debris of a potter's workshop. In the first place, the breakage of a large number of exactly the same type of pot is more likely to occur in a pottery than in an ordinary household.<sup>10</sup> Secondly, there were found mixed with the sherds some small lumps of fired clay, roughly pinched into shape and with marks of rims on them. They seem to have been used for propping pots in a kiln. The coarse unglazed rings may also be kiln props. Thirdly, one plate (see p. 180, n. 13) must have been fired or refired after having been broken, and may be a potter's trial piece. Lastly two small potter's moulds were found with the pottery.

<sup>9</sup> There were, for instance, some sherds with 'West Slope' type of decoration, and parts of five twisted amphora-handles with poor black glaze, like the handles of such West Slope amphorae as Thompson's D 25, 27

and 59 (H. A. Thompson, *Hesperia* III, 311 ff.: 'Two Centuries of Hellenistic Pottery').

<sup>10</sup> Cf. Well K 4 in the Agora, mentioned by M. Z. Pease, *Hesperia* VI, 257, n. 3.

## POTTERY FROM THE CISTERN

*A. Lowest Deposit*1a. *Buckets, knobbed.*

PLATE 13, B. Five nearly complete; parts of three others. Height of those made up varies from 24.5 to 28.5 cms. All have very thick walls and handles and two rows of knobs set round the body. These were obviously intended to keep the body itself from bumping and breaking against the walls of the shaft.<sup>11</sup> The most usual type is as PLATE 12, B, b, with greatest diameter towards the bottom of the body, turned foot and nearly vertical lip. The lip is pinched in by the handles so that its plan is oval, and is strengthened at each side, below the handles, by two thick ribs. Sometimes the lip is not pinched in or is sharply offset from the body. One bucket, PLATE 13, B, a (handle conjectural), has string marks on the bottom and no base.

1b. *Buckets, plain.*

PLATE 13, B, c. Only one occurs. Ht. 24.2 cms. Not so thick in fabric as the above. Flaring lip pinched in by wish-bone handle.

There are examples of pottery buckets with basket handles from the houses at Delos (nos. 1027, 4569, and one unnumbered from the House of the Diadoumenoi). The earliest such bucket in the Agora (P 8025) is in a late second and early first century context. I know of no other knobbed buckets.

2. *Large Basin.*

PLATE 15, A. Diam. 67.5 cms. Ht. 12.75 cms. Flaring sides, flat narrow rim, flat handles attached to edge of rim and pierced with small holes.

*B. Main Deposit*

## I. GLAZED WARE.

The clay is fairly fine and smooth, though often rather chalky. It is usually yellowish pink, but varies from apricot to grey according to firing. (Attic clay of the Hellenistic period also varies considerably in colour, as the Agora finds show.) The glaze is generally poor and flakes easily; it is very metallic and often mottled with colours. Sometimes it only partly covers the pot. Some of the shapes are closely paralleled from other sites (bowls with outcurved rim or with incurved lip); others seem to be local (round cups, mugs, oipae). Whatever the shape, the clay and glaze are so alike in their variations that it is most improbable that any of the types are imports.<sup>12</sup>

1. *Bowls with outcurved rim.*

(a) PLATE 14, A, right; profile, fig. 15, B. Large, undecorated. At least thirty occur, varying in diameter from 20.5 to 29 cms.; they are usually about 23.5 cms.; one is only 17.5 cms. Bottom of foot turned. Glaze covers the inside of the bowl and trickles down outside.

<sup>11</sup> Just as the knobs on the Late Hellenistic brazier, no. 801 in the British Museum (*BM Catalogue of Vases* I, 139), were presumably to keep things from coming

into contact with the brazier itself.

<sup>12</sup> Glazed Megarian bowls which may be local are listed with the other Megarian bowls.

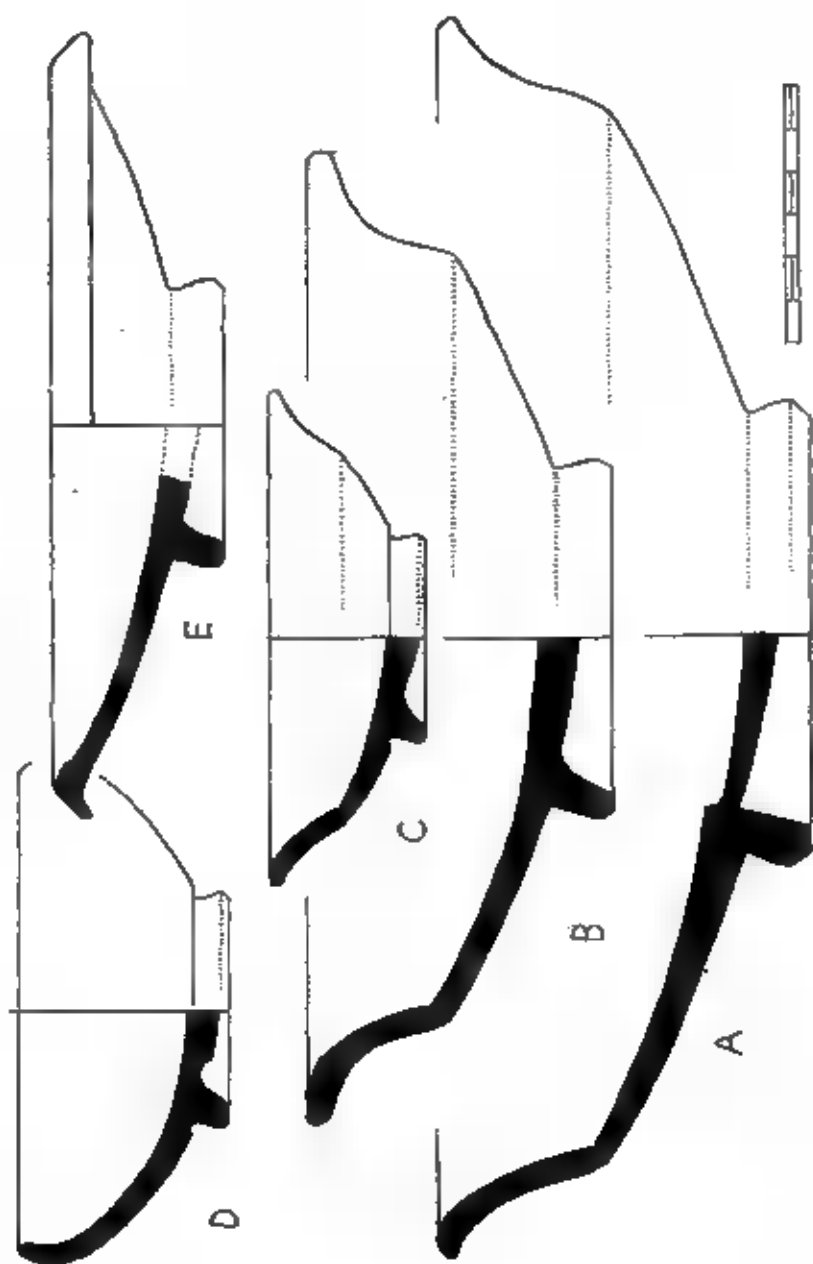


FIG. 15.

(b) Large, decorated. Same profile, except that one is a 'fish-plate', with a depression in the middle (PLATE 14, A, left; profile, FIG. 15, A). Parts of five occur, each decorated inside with three palmettes surrounded by a ring of rouletting. The palmettes are of much the same form as Thompson, *Hesperia* III, 431, D 5, with the leaves springing from a central stem. On three bowls, one of which is the 'fish-plate', the palmettes were stamped with the same stamp.

(c) FIG. 16, C and D; profile, FIG. 15, C. Small, undecorated. At least twenty-four, varying between 10.5 and 12 cms. in diameter. One is only 8.3 cms.

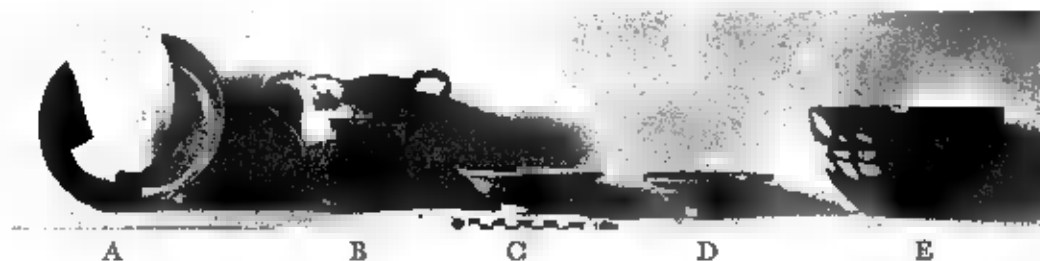


FIG. 16.

(d) Small, decorated. Part of one found; diam. 10.6 cms. Same profile. Ring of rouletting near the centre. Unusually good black glaze all over.

The sharply offset rim of all these bowls is paralleled in Thompson's D and E groups; cf. D 5, E 33, *op. cit.* 437, and E 42, *ibid.*, 396.

## 2. Bowls with incurved lip.

PLATE 14, B; profile, FIG. 15, D. At least twenty-one large, and six small. Diameter at widest part averages 12.5 and 8.75 cms. Glazing as in bowls with outcurved lip.

Fairly close in profile to Thompson's D 9, *op. cit.*, 436.



FIG. 17.

## 3. Plates.

(a) With plain rim. FIG. 17; profile, FIG. 15, E. At least thirty. Diam. from 16.3 to 18.6 cms. Bottom of foot turned. Rim turns down fairly sharply. Usually there are



one or more grooves around edge of plate inside rim.<sup>19</sup> For profile, cf. Thompson, E 27, *op. cit.* 436, though ours are shallower.

(b) With decorated rim. (i) Frag. Diam. 29.3 cms. Rim more sharply turned down. Inside rim a band of rouletting surrounded by two incised lines. (ii) Frag. Profile, fig. 18. Rim does not turn down and is stepped. Good black glaze inside and out.

For rim of unglazed plate, see below, p. 184, and profile, fig. 24.

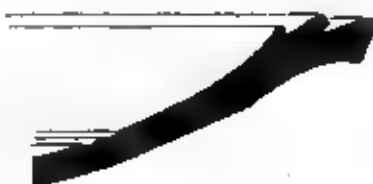


FIG. 18.

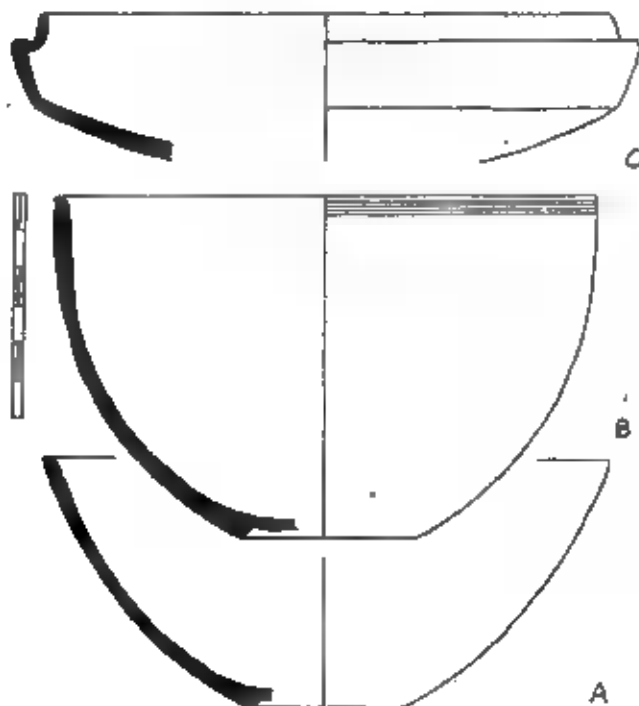


FIG. 19.

<sup>19</sup> On one plate, of which about half was found, most of the glaze is black, but two fragments which fit directly against the black have brick-red glaze and slightly redder clay than the black fragments. The Black part must have undergone its final firing under reducing and the red under oxidizing conditions. It seems therefore that either the potter originally fired the two parts of the plate under different conditions, to test the glaze, or that the whole plate was fired red

or black, and part afterwards refired under different conditions, whether accidentally or deliberately. See Binns and Frazer, *AJA* XXXIII (1929), 1 ff., and Weickert, *AA* LVII (1942), 512 ff. Whether Weickert's conclusions about the composition of the glaze apply at so late a date I do not know; would mere carelessness of execution account for the flaky and discoloured glazes which occur even in Attica at this time?

4. *Bowls with straight rim, various.*

(a) fig. 16, E; profile, fig. 19, B. Diam. 15.3 cms. Ht. 8.8 cms. Deep, with well curved sides. Bottom turned. Four narrow grooves along outside of rim. Light pinkish-yellow slip. Inside glazed Indian red; outside splashed and streaked with glaze which varies from golden to red and black. Here the polychrome effect is obviously deliberate.

(b) Small frag. Diam. 11.5 cms. Walls slope in a little towards the top. Glaze as in (a).

(c) Rim only. Diam. 16 cms. Red glaze inside and out.

(d) Rim only. Diam. 19 cms. Poor black glaze inside and out.

(e) fig. 16, A; profile, fig. 19, A. Diam. 15 cms. Ht. 6.5 cms. Shallower than (a), with straighter, more flaring sides. Black glaze inside and out; inside, three lines of white paint. Cf. Thompson's D 28.

5. *Carinated bowl.*

One only. Profile, fig. 19, C. Diam. about 16.5 cms. Black glaze inside and out.

6. *Lid.*

One only. Middle part missing. Diam. about 17 cms. Shaped like a flat dome; edge turned down to fit outside rim of box or bowl. Inside only partly glazed; outside black, with concentric circles, alternately thick and thin, in white paint.

7. *Round Cups.*<sup>14</sup>

fig. 20. At least five large exx.; forty small. On an average the large exx. are 11 cms. high and 12 cms. in diameter, the small 8.25 cms. high and 9.5 cms. in diameter. Lip sharply offset; ribbon handle attached inside rim; bottom turned. Walls thin. Glazed all over.

The cups, particularly the large ones, have often warped considerably, perhaps evidence that these pots were unsatisfactory pieces from a pottery.

8. *Cups with inset rim.*

PLATE 14, E, below. Parts of four occur. The height of the one of which the whole profile is preserved is 8.25 cms. Low ring foot, turned. Ribbon handle (upper attachment not preserved). Glazed all over.



FIG. 20.

9. *Mugs.*

fig. 20. At least thirty-one occur. Average height 9 cms. Walls thin. Ribbon handle attached inside rims. String mark on bottom. Many are very lop-sided. Glazed all over.

<sup>14</sup> The form is not unlike that of several M.M. cups, particularly Evans, *PM* I, 241, fig. 181, and IV, 132-3, figs. 100-1; cf. also Geometric cups, e.g. *BSA*, XXIX, pl. IX, 2 and X, 8. But all these are shallower than our cups and their handles are not attached inside the rim.

10. *Two-handled Cups with fluted mouth.*<sup>15</sup>

FIG. 16, B. Two exx., 11.5 and 11 cms. in height. Rim slightly offset and pinched into flutes. Ribbon handles attached inside rim. Ring foot, turned. Glazed ■ over.

11. *Flat-mouthed Olpai.*

FIG. 21, A and C. At least eight exx. Heights of the four of which the complete profile is preserved vary from 20.5 to 23 cms. Ring foot, turned. Ovoid body. Wide flat lip. Ribbon handle attached inside lip. Glaze particularly polychrome, ranging from yellow ochre to black. In the museum ■ Herakleion there is an olpe of much the same shape, bought at Astritzi (no. 290). The rim ■ a little narrower and the widest diameter higher. It ■ covered dull black inside and out, and has a row of roughly-painted white dolphins around the neck.<sup>16</sup>

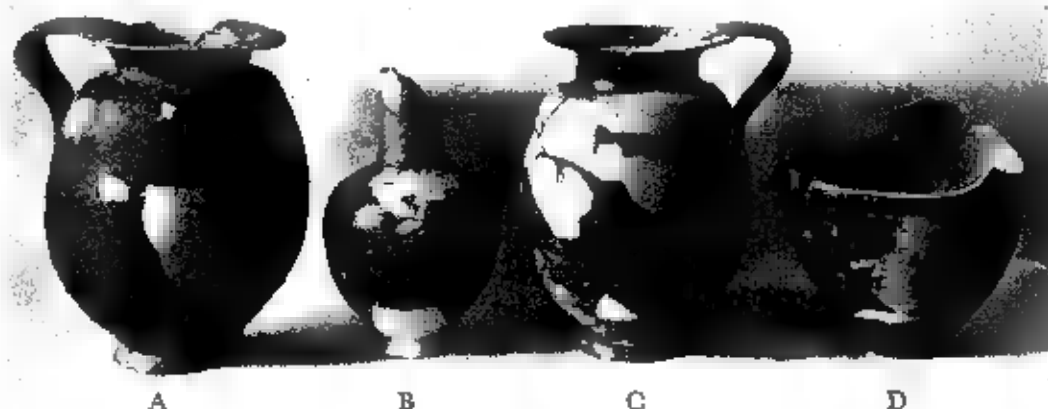


FIG. 21.

12. *Jugs?*

FIG. 21, D; profile, FIG. 22. Three exx., of which only the bottom half is preserved. In two it is possible to measure the widest diameter, which is 13.7 and 11.5 cms.; the third was smaller. Black glaze outside. The glaze has trickled down inside.

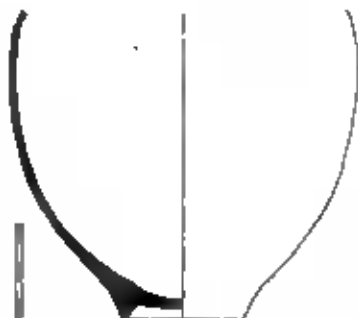


FIG. 22.

<sup>15</sup> Cf. Minoan metal and clay vases with fluted lips, e.g. Evans, *PM* I, 192, ■, 139.

<sup>16</sup> Reminiscent of L.M. vases; e.g. handleless alabaster from Mochlos, *PM* IV, 271, fig. 201; flat alabas-

tron, *ibid.*, 272, fig. 202; amphora, *ibid.*, 273, fig. 204; also of Protocorinthian and Corinthian alpai, such as BSA XXVIII (1927-8), pl. XXV, found at Knossos.

13. *Trefoil-mouthed Jugs.*

FIG. 21, B. Fragments of three occur. Ovoid body; narrow neck with trefoil lip; ribbon handle. No example of a foot is preserved.

14. *Long-necked Bottles.*

PLATE 14, C and D. One nearly complete; necks of three; fragments of bodies. Three of the necks are wider at the top than at the bottom and have mouths with a slightly convex surface. A bottle of this kind was found by Blakeway and Brock at Knossos, in a secondary burial in a proto-geometric tomb.<sup>14a</sup> The fusiform *unguentarium* from Thompson's Agora groups which is closest in shape to this bottle is C 76, but the bottle has a much sharper curve between neck and shoulder. Examples which are closer to ours in size, though unglazed, are Zahn, *Priene*, 426, no. 102; *AM LIV* (1929), 47, no. 11; Agora, P 9814 (unpublished; from a cistern-fill of the third quarter of the first century). The last two examples have a much smaller lip, and are not really very like ours.<sup>14b</sup>

The fourth neck widens downwards and the surface of the mouth is quite flat. On the neck a vase of something the same shape, but narrower and without a horizontal lip, is painted in poor white paint, with a row of dots below it.

The clay is grey in the complete bottle, normal in the others.

15. *Small Olpe.*

PLATE 14, E, above. Ht. 7.7 cms. Offset lip. Ribbon handle attached outside neck. String mark on bottom. Only the top half is glazed.

## II. UNGLAZED WARE.

1. *Carinated Cups.*

FIG. 23, A. About twelve exx. Average widest diameter is about 9 cms. A few have no sharp carination. Offset lip, ribbon handle attached inside lip. Clay is rather gritty, and varies considerably in colour as in the glazed specimens.



FIG. 23.

2. *Flagon.*

FIG. 23, B. One ex. only. The bottom part of a globular body belongs to this neck. Neck narrow, with flat vertical lip. Ribbon handle. Clay as above.

3. *Ladles?*

FIG. 23, C. Parts of seven occur. Ribbon handle; string mark on bottom. The curve of the handle does not allow the ladle to stand quite flat. The shape recalls that of Minoan pottery braziers, e.g. *BSA* (1926-7), 292, figs. 44-5 and Pl. XXII, 1-2.

<sup>14a</sup> *JHS* (1935), 166, tomb B.

<sup>14b</sup> For earlier examples of kindred shapes, see Clara

*Rhodes II*, 147, fig. 27 and IV, 378, fig. 427. J. Cook tells me that others were found at Old Smyrna.

4. *Plate.*

Profile, fig. 24. One small fragment only of rim of very carefully made plate. Diam. 17.2 cms. Clay pinkish, fine cream slip.



FIG. 24.

5. *Hydria.*

PLATE 15, B. One nearly complete; fragments of two others which had at least the same linear decoration. Height preserved, 41.5 cms. Top of neck and vertical handle missing. Clay normal, fairly smooth. Decoration in dark brown glaze; horizontal lines on shoulder and belly; from each side of horizontal handles, a volute; from line on shoulder, below vertical handle, a fleur-de-lys. Perhaps a reminiscence of the Minoan lily or papyrus?

6. *Trefoil-mouthed Oinochoai.*

FIG. 25, A. Two exx. Height of each, to rim, 24.5 cms. One had two scratched lines around the neck, and a black line around the neck and down the handle. The other is plain and more coarsely made.

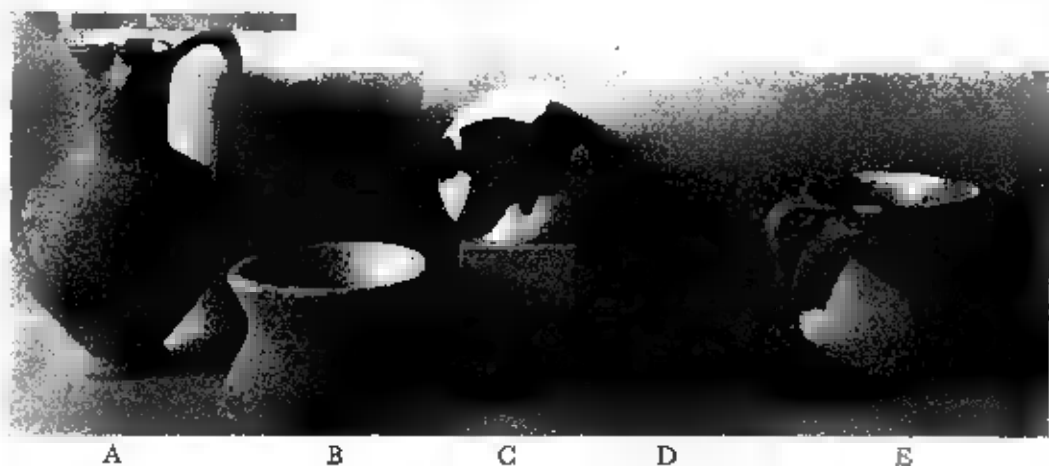


FIG. 25.

7. *Household Bowls.*

PLATE 15, B. At least ten exx. Height of the two made-up exx. is 12.5 and 15 cms. Very curved body, sharply out-turned rim with engraved line around edge. Thick ribbon handles close below rim. Glaze inside and to edge of rim.

8. *Circular Stands.*

(a) fig. 25, B. Three examples. Hts. 8.5, 9.5, and 10 cms. Rounded top edge; flat bottom edge. Perhaps used as a stand for round-bottomed cooking pots.<sup>16c</sup>

<sup>16c</sup> Cf. *Olympia-Bericht* IV (1940-1941), fig. 76, for a pot-stand of classical date.

(b) As sketch, FIG. 26. Ht. 24 cms.; diam. at bottom, 24 cms. Parts occur of nine other rims, but no other complete profiles. One is 30.5 cms. in diameter; the others vary between 24 and 19.5 cms. Walls fairly thin; rims rectangular or circular in section. Profile sometimes has more pronounced bulge. Usually one or more lines are traced with a blunt graver outside, close to rim. Inside on opposite sides, groups of scratches, usually criss-crossed.



FIG. 26.



FIG. 27.

(c) As sketch, FIG. 27. At least ten exx. The largest is 32 cms. in diameter and 5.5 cms. in height; the others vary between 25.5 and 21 cms. in diameter and 5.5 and 3 cms. in height. (The height is not in proportion to the diameter.) Thickness, about 1 cm. Possibly some kind of kiln-prop?

### III. COOKING POTS.

#### 1. *With bulging body and narrow neck.*

(a) FIG. 25, E. Top diameter 13.5 cms. Ledge for lid; two vertical ribbon handles. Neck and handle of another. Cf. Thompson's D 70 and 71.

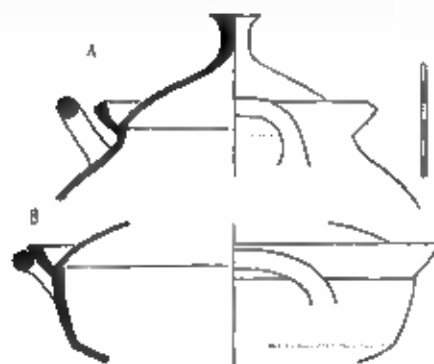


FIG. 28.

(b) Fragment. Profile, FIG. 28, A. Top diameter 15 cms. As above, but with two horizontal handles, round in section. Lid to fit, convex with flat-topped knob. Parts of three more pots as (a) or (b), one without ledge for lid.

2. *Casseroles*.

(a) FIG. 25, D. Diam. 14.75 cms. Sides bulge out towards bottom, which is rounded. Ledge for lid. Horizontal handles, round in section, joined to rim.

(b) Fragments. Profile, FIG. 28, B. Diam. about 22 cms. Similar, but sides narrow downwards. Fine fabric. Cf. profiles of Thompson's D 72 and E 141 (*Hesperia* III, 467, fig. 121).

(c) Fragment of another with diameter 20.5 cms., with almost vertical sides.

The clay of all these is gritty and hard. It is usually dark in colour, varying from ochre to purple and dark crimson. The walls are usually thin and the pots extremely well made. There are a few small fragments of much larger and coarser pots.

## IV. YELLOW-GLAZED WARE.

1. *Kantharos*.

PLATE 15, C. Height to rim, 20 cms. Sharply profiled lip;<sup>17</sup> high-swung handles; very low foot, turned, with a cylindrical hollow underneath. Elongated profile. Lower part of the body engraved to represent fluting.

Clay of local type. (One would in any case expect a pot of so breakable a shape to be local.) Transparent yellow glaze, obviously in imitation of gold. There are no traces of actual gilding.

The prototype is, of course, metal. The two metal examples known to me (Reinach, *Antiquités du Bosphore Cimmérien*, pl. XXXVIII and p. 20 = *AM* XXVI (1901), 100, and that published by Wuilleumier in *Le Trésor de Tarente*) have long stems.  $\Sigma$  have many of the pottery examples, e.g. Furtwängler, *Coll. Sabouroff*, pl. 70 (faience) and Munich nos. 2911 and 2912 (black glazed; probably some Italian fabric). But such proportions are obviously ill-suited to pottery, and one finds thick-set, short-stemmed versions such as the West Slope example *Hesperia* V (1936), 38. Such a low foot as ours is not common, but occurs for instance in Thompson's B 20 (West Slope ware; late fourth or very early third century), and in a late Campanian kantharos in the British Museum.<sup>18</sup>

The shape is a long-lived one. Thompson (*ibid.*, 363) points out that the vase illustrated on a fragment of a Megarian bowl (C 36) must be meant for such a kantharos; it clearly shows a double lip though not the angular profile of the lip (one cannot expect meticulous accuracy from a Megarian bowl). Probably D 49, from a mid-second century group shows, as he says, another, though here the lip is broken away. The kantharos most like ours in proportions is that which appears on some bronze coins of Tarentum quoted and illustrated by Wuilleumier and dated by Vlasto (*Journal International d'Archéologie Numismatique* 1899, 5) between 281 and 272 B.C. Ours cannot, in the circumstances, be of so early a date; a vase so roughly made would be unlikely to be treasured for long, or one of so brittle a shape to survive. On the other hand, the family plate would obviously be hoarded for generations, and it would not be surprising if vases which closely imitate metal prototypes were sometimes old-fashioned in their proportions. Again, in so rough a vase the proportions may be fortuitous; other kantharoi of this ware found at Knossos have shown considerable variations.

2. *Lamp Stand*.

PLATE 15, G. Profile of foot, FIG. 29. Height preserved, 18 cms. The top is missing, but some other examples found at Knossos have their tops rubbed or scraped to make

<sup>17</sup> In the cup published by Wuilleumier (see above, p. 186) there is an outer shell with the fluting beaten out on it, and a smooth inner shell whose upper edge fits over the vertical rim of the outer. Presumably the

practice of making metal kantharoi in this way accounts for the curious vertical member of the lip of all these kantharoi.

<sup>18</sup> BM. Inv. 73. 8-20, 314.

them fit exactly into the round hole of the lamp. I do not know of any corresponding lamps having been found. For lamp and stand, see *Olynthos* V, pl. 201.

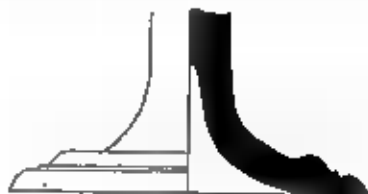


FIG. 29.



FIG. 30.

(Scale 1 : 2.)

### 3. Cup or Jug.

Fragment. Profile, FIG. 30. Top diameter about 7 cms. At one end of the sherd the rim is slightly crooked, as though it were pushed in by the attachment of a handle.

## V. PLASTIC FRAGMENTS, UNGLAZED.

1. (a) PLATE 16, C, 1. Part of vertical handle in the form of a grooved stem decorated with overlapping acanthus leaves. Neither attachment preserved. (I have no measurements; the scale of PLATE 16, A and C is practically the same.)

(b) PLATE 16, C, 2. Part of handle as above, but with leaves facing in both directions. Probably from the same vase.

2. PLATE 16, C, 3. Handle of kantharos? Sharply curved. Decorated with plastic leaves facing in both directions. Neither attachment preserved.

3. PLATE 16, C, 4. Handle as above, but from a different vase. Small flowers in the angles between leaves and handle.

4. PLATE 16, C, 5. Dolphins. Two exx. The tails of both are broken. They were attached to something by their noses, like the dolphin on the Roman bronze jug no. 513 in the Metropolitan Museum (*Catalogue of Greek, Etruscan and Roman bronzes*, 195).

5. PLATE 16, C, 6, and D. Part of handle of hydria? The handle itself is a double rope. At upper attachment, mask in high relief. The features are much blunted; the mask must have been either insufficiently pressed into the mould or rubbed before it was dry.

It is obviously difficult to find justifiable dated parallels for so roughly executed a head. It seems to have several points of resemblance with some of the figures in the frieze of the great altar of Pergamon, particularly with the giant shown in pls. XII, XXIV, and XXVI (bottom right) of the Pergamon publication.<sup>19</sup> The heads resemble one another in their solidity and simplified outline; both have a low, triangular forehead, wild hair growing up vertically from the brow, sloping eyes, short upper lip and rounded chin.

Again, the general proportions and the hair are reminiscent of the head of Helios on the Rhodian coinage. *BMC Caria and Islands*, no. 229, pl. XXXIX, 19 (a gold stater), dated 189-166, seems particularly like ours in details, though the general form is less solid.

On the grounds of these resemblances one would be inclined to date the handle some time near the middle of the second century.<sup>20</sup>

<sup>19</sup> *Pergamon*, III, ii.

<sup>20</sup> The mask is very like the photographs which Pagenstecher publishes of two black-glazed bowls with Medusa-head *ambienata*, both found in Crete (*Jah* 1912, 146, fig. 1, now in Candia Museum; and *Calenische Relieftkeramik*, pl. I, now in the Louvre). I have myself seen the bowl in Candia and do not think

that the photograph gives a correct impression of the character of the mask which is actually much more regular and less heavy in proportions, more controlled in mood and more carefully executed, than the photograph suggests. Pagenstecher says that the two masks are very alike; probably neither of them is really like the mask on our handle.



## VI. MEGARIAN BOWLS.

1. PLATE 15, E. Profile, FIG. 31, A. Top diam. 12.8 cms. Clay, dark grey; glaze, matt black. In medallion, rosette. First band: three rows of leaves, overlapping. Cf. Courby, *Vases Grecs à Relief*, fig. 82, 13, for a single row in this position. Second band: vine shoot with grapes and leaves (*ibid.*, fig. 77, 9). Border: key pattern with saltires enclosed in oblongs (*ibid.*, fig. 76, 4).

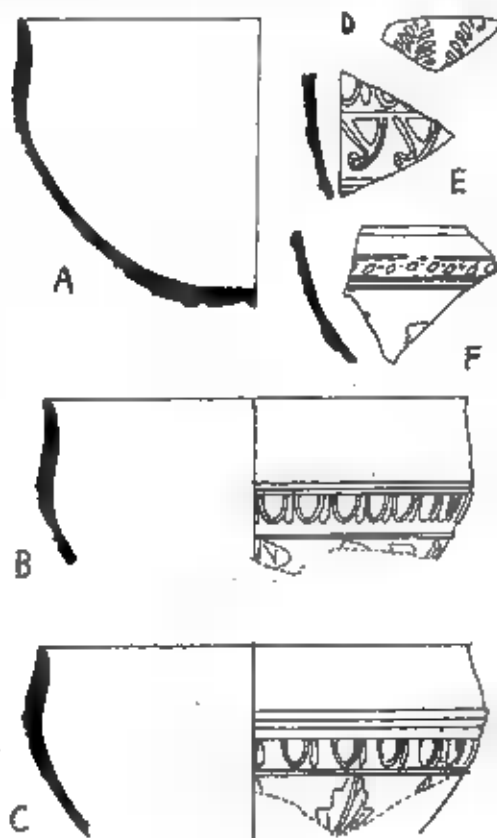


FIG. 31.  
(Scale 1 : 2.)

2. FIG. 31, B. Top diam. 11.4 cms. Clay pink; glaze metallic dark brown. Part of band with ivy leaves as Courby, fig. 77, 10? Border: egg and dart.

3. FIG. 31, C. Top diam. 11.6 cms. Clay grey; glaze matt grey. Tips of radiating leaves, apparently two lobed and one plain. Courby, pl. XIII, 19, has alternately lobed and plain leaves. Border: egg and dart. Each dart was stamped into the mould with the same die as the adjoining egg, and a space was left between the impressions.

4. FIG. 31, D. Clay pink; glaze metallic dark brown. Thin fabric. Fragment from near the bottom of a bowl, with sloping palmettes. A little like Courby, fig. 80, 8.

5. FIG. 31, E. Clay and glaze grey. Part of egg and dart border, and of band with post-horn pattern (Courby, fig. 76, 8).

6. FIG. 31, F. Clay pink, glaze metallic brown. Part of rim with border decorated with blobs.

The profiles of 1, 2 and 3 and the decorative motives of all but 6 are of the 'Delian' type. 1, 3 and 5 are obviously imports, to judge from their clay and glaze. 2 and 4 might be local imitations. 6, with its odd profile and decoration, looks local.

## VII. LAGYNOS.

PLATE 15, D. Low body with angular shoulder. Slightly flaring lip. Strap handle with two grooves. A hole is bored through the vertical part of the handle. The neck is prolonged inside the body, narrowing slightly but is broken away after 2.5 cms. Lower part of body missing. Clay pinkish yellow; cream slip, rather chalky. Decoration, painted in thinned brown glaze, consists of: a band around lip; four bands at angle of shoulder; on shoulder, four arched lines bordered with dots, presumably branches with a bunch of grapes(?) hanging from the centre of each. The fabric is such as one often finds in imported *lagynoi*.

A *lagynos* found at Corinth (Broneer, *AJA* XXXIX (1935), 71 ff.) also had a vertical hole through the handle, which is missing, and the same extension of the neck, complete and not much longer than in our vase. A fragment of a neck of the same kind is illustrated by Zahn (*Prism* 401, no. 18 = Leroux, *Lagynos*, 24, no. 26); and a vertically pierced handle by Watzinger (*AM* XXVI (1901), 56 f. = Leroux, *Lagynos*, 21, no. 16). Such *lagynoi* seem to have been made for playing some kind of practical joke on unwary revellers.

### Miscellaneous.

#### 1. KILN PROPS.

PLATE 16, B. Many small lumps of fired clay occur, roughly pinched into shape, and marked with the impressions of the rims of cups or small bowls. Though they must obviously have been used as kiln props I could not find among the cistern pottery any rims which exactly fitted the impressions.

#### 2. PLAQUES.

PLATE 16, A. Upper parts of three plaques, all from different moulds, showing a horse-man with flying cloak and crested helmet. Small suspension hole. Lower part of similar plaque showing hind legs of rearing horse and tail of snake.

Design and execution extremely rough. The fragment with the snake is of such crumbly clay that it seems to have been merely sun-dried and not yet fired.

I have notes and sketches of some similar plaques which are or were in Candia Museum and are said to have been found at Kounavoi, near a destroyed kiln. One fragment shows a horse's feet with a snake, complete, lying more or less underneath them, as in ours. In another, the most complete, the snake rears up and confronts a standing figure, presumably a worshipper; but in most of the plaques the position of the suspension-holes would preclude such a figure. In two, which look particularly late and barbarous, the rider has no cloak and holds a spear almost vertically, and there is an oval shield(?) hanging in front of the horse's head. Only two are from the same mould.

For another Hellenistic plaque with rider and snake, cf. G. Davidson *Hesperia* XI, 111.

In such reliefs both rider and snake are presumably the Hero of some local cult.

#### 3. MOULDS.

##### (a) *Lion's head*.

PLATE 16, B. (Impression.) Height preserved, along central axis, 4 cms. The mould is broken around the animal's face, and the mane and ears are gone. The remaining part is broken in two.

It is not possible to say whether the lion was complete or merely a head, and whether

in the round or in high relief. The shape of the mouth and the projecting, deeply grooved tongue suggest that the head may have been a spout.

Again reminiscent of the Pergamene altar. The full-face lion, *Pergamon* III, ii, pl. II, offers most points of comparison, having widely open eyes (though not so round as our lion's), the same soft, puffy muzzle, with little feeling for any underlying bony structure, the same pattern of wrinkles on the muzzle, and the same gaping mouth with dropped lower jaw.

#### (b) Female head.

PLATE 16, E. Height, 4.2 cms. Perhaps the *emblemata* for a bowl. The girl seems to wear a winged cap which is fastened by a band under the chin. (The wing on the left side of the head does not show clearly in the photograph.) The hair is treated as a simple mass covered with finely engraved lines; it ends in twisted waving ringlets. I cannot satisfactorily identify this head. She might perhaps be an amazon with a winged cap, as on coins of Soli,<sup>21</sup> or perhaps a Gorgon with twining snake-like ringlets. On a coin-series of Gortyna there is a Gorgon's head, based on the heads on Rhodian coins.<sup>22</sup> Cf. also the Gorgon *emblemata* in the two bowls found in Crete (see above, p. 187, note 20).

In mood and in form the head shows a general likeness with the 'Schöner Kopf' from Pergamon:<sup>23</sup> for instance in the hair line, the slope of the eyes, the small mouth, the simplified outline (though ours is a less heavy type), and particularly in the very delicate and suggestive treatment of the eyes.

#### 4. LAMPS.

1. (a) PLATE 14, F, 1; profile, fig. 32, 1. Widest diam. 7.2 cms. Body angular, top slightly concave. Glazed all over.

(b) PLATE 14, F, 2; profile, fig. 32, 2. Diam. 7.6 cms. As above. Cf. Thompson, C 55, (*Hesperia* III, 366, fig. 50), which has almost the same profile. C 54 and 56 have the same lip, but the profile of their bodies is rounded.

2. PLATE 14, F, 4; profile, fig. 32, 3. Diam. 6.2 cms. Body not quite angular; lip turns up. Glazed all over. Fragments of four others of the same type, wholly or partly glazed, one with a slightly longer lip; profile, fig. 32, 4.

3. PLATE 14, F, 3; profile, fig. 32, 5. Diam. 6.6 cms. Body bulging, lip as in 2. The profile is very like that of Broneer, *Corinth* IV, 2, fig. 14, 44, but more squat. Glazed all over.

4. Profile, fig. 32, 6. Diam. 5.8 cms. Low foot; flat bottom which meets side in a sharp curve; horizontal lip. Nozzle broken away. Nozzle alone glazed.

5. Profile, fig. 32, 7. Neck only preserved. This is funnel-shaped, like that of Broneer, *op. cit.*, fig. 14, 49 (Type 15), though in detail the profiles are very different from one another. Glazed all over. Cf. *Olympia-Bericht* IV (1940-1941), fig. 66b<sup>1</sup>.

6. PLATE 14, F, 5; profile, fig. 32, 8. Fragment of bowl-shaped lamp with several spouts. Diam. 13 cms. The bowl is carinated in profile and glazed to below carination.

These lamps are all wheel-made. They are wholly or partly covered with glaze of the same metallic and polychrome kind as that on the glazed pots. They have thick walls, long pointed nozzles, string marks on the bottom and (in contrast to Attic and Corinthian lamps of the Hellenistic period) horizontal handles. The profiles of 1, 2 and 3 are most like those of Broneer's Type 12, *op. cit.*, fig. 14, 44 and 45. This type, though not dated exactly, probably belongs to the end of the third and beginning of the second centuries. Type 15, whose funnel-shaped lip our 5 resembles, is dated in the first half of the second century. Among Thompson's groups, nos. C 55, 56 and 57 are

<sup>21</sup> BMC *Lycaonia, Isauria, Cilicia*, pl. XXV, 2-8.

<sup>22</sup> BMC *Crete and Aegean Islands*, pl. XI, 10; J. N. Svoronos, *Nomismatique de la Crète ancienne*,

pl. XVI, 3. I am grateful to Mr. Robinson for drawing my attention to these coin-series.

<sup>23</sup> *Altertümer von Pergamon* VII, pl. XXV, 90.

closest to ours. E 89, 90 and 96 are also like, but the juncture between rim and side walls is much sharper.

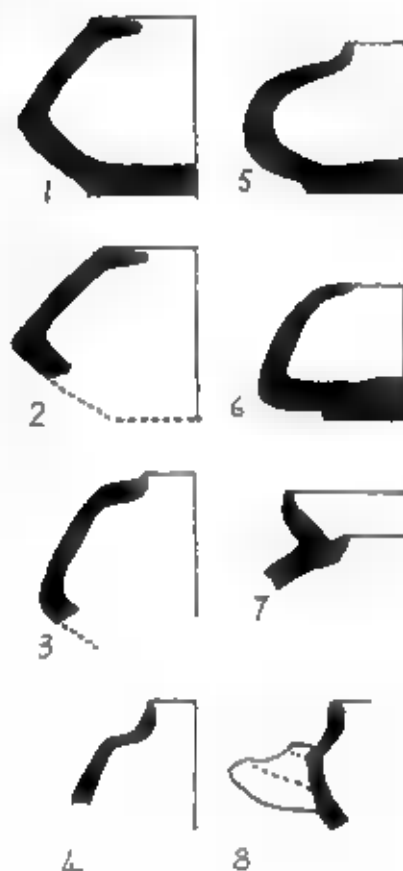


FIG. 32.  
(Scale 2 : 3.)

To sum up, the shape and glaze of some of the glazed ware (plates, bowls with outcurved and incurved rim) is close to that of pots in Thompson's D and E groups. Pots of these shapes would be particularly easy to pack and export, so that one would expect to find close provincial imitations of Attic types. Thompson's D and E groups are very alike and he assigns them to the middle and end of the second century respectively. The lamps are closer to Thompson's C group, but the lamps from the kiln surface were primitive and old-fashioned compared with Attic lamps, and one might expect the same to hold good of the cistern types. *Lagynos* and Megarian bowls fit in well enough with a second century dating, which the style of the plastic head and the two moulds seems to corroborate.

A few apparently local shapes (flat-mouthed olpe, round cups, cups with fluted mouths, ladles) are, as has been noted, slightly reminiscent of Minoan shapes; so is the fleur-de-lys decoration on the unpainted hydria; but the resemblances are not, I think, strong enough for one to regard them as more than curious coincidences.

BETTY HOMANN-WEDEKING

## AN ATTIC BOWL

(PLATES 17-18)

In PLATE 17 and FIGS. 1-2 I publish a bowl formerly in the possession of Humfry Payne, which passed to me from Mrs. Payne.<sup>1</sup> It was bought in Athens and was, I believe, found in Attica.

Diameter 32.5 cms., depth of bowl 6.5 cms. Foot and some fragments of bowl and rim missing. On rim, ■ central black and two red bands, bordered by white lines; on outside edge, zigzags. The inside is black, but had a design in the tondo, of which only a red band bordered by white lines, as on the rim, remains.

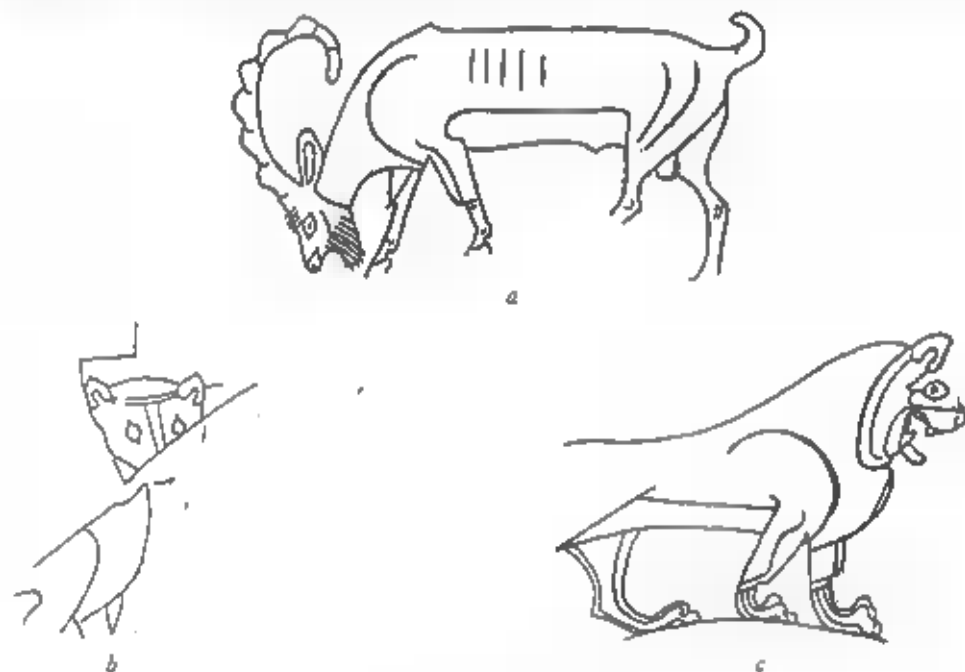


FIG. 1.—ATTIC BOWL, DETAILS.

The shape is common in Attica in the late seventh and early sixth centuries, not elsewhere,<sup>2</sup> unless perhaps in Boeotia. That this vase is Attic is

<sup>1</sup> The bowl, left in the British School at Athens in 1939, was missing on my return to Athens in 1945, and I have not recovered it. The photographs are by Emil Seraf, the drawings by Miss Audrey Petty. She has not been able to complete them in front of the vase, but their accuracy may be relied on.

<sup>2</sup> The Corinthian examples, *NC*, nos. 716-9, fig. 132, differ in many important respects: in the size of the

foot, the profile of the rim, and the fact that the chief picture is inside. This means that they were intended to stand on their feet and be looked into. Our vase and others like it, with the main decoration on the outside, were hung on the wall when not in use; cf. *NC*, fig. 44D; Louvre E 563, Pottier pl. 45; Beazley, *Attic Black-Glazed V*, 101, and fig. 10.

made certain by the clay, which is a warm brown with a tendency to red. The surface is well polished. The paint is good, rather lustrous, and brown where used thinly. The applied red is exactly that of many Attic vases of the period.

But this vase, though Attic, is not painted in Attic style. The animals are pure Corinthian, the use of filling ornament is Corinthian. Payne pointed this out to me, and indicated the workshop in which the painter was brought up; it is that of the Sphinx Painter.<sup>3</sup> He was unable to find a vase by the same hand, but comparison with the later works of the Sphinx Painter and others from the same workshop leaves no doubt that this vase belongs to that family. This conclusion needs to be supported by detailed comparisons with the Corinthian works of this group, and other contemporary Corinthian and Attic vases. We have on our bowl lions, goats, panther, bird, a fair selection from the Corinthian beast-world. The lions and, apparently, the panther are of the Protocorinthian type, but with the thickening body which becomes common in the Transitional period; for the general proportions compare *NC*, pl. 14; 16, 6-7; and, for contemporary Corinthian vases in different style, *ibid.*, pl. 13.

The closest of these is the fragment of an olpe in Heidelberg, *NC*, pl. 14. The goats are particularly like; compare the eye, the line which marks off the belly-stripe, the outline of the back leg, the curving horns (cf. *NC*, 70, n. 6; the typical goat of the Sphinx Painter, *NC*, pl. 25, 5, has straight horns). The differences, in the use of incision and in the greater heaviness of body, make it unlikely that we are dealing with a later work of the same painter, and the dissimilarity of the panthers on the two vases bears this out. The panther's head on the bowl (fig. 1b) is slightly drawn, but has no exact parallels; the shape of the forehead and the distribution of red are unusual; <sup>4</sup> the eyes are set more vertically than is common; <sup>5</sup> unfortunately the lower part of the face is destroyed. A nearer parallel may perhaps be found in the work of another Corinthian, the Painter of Vatican 73; see *NC*, pl. 11, 4-5. This painter's goats, *NC*, pl. 11, 1; 16, 4, especially the former, are

<sup>3</sup> *NC* 31 and n. 1. To the list of his works there given add:

Pyxis, fr., Athens, from Perachora, *Perachora* I, pl. 24, 1 (Payne);  
Oinochoe, Corinth C. 32.233, *AJA* XLI (1937), 230, figs. 28-9; *Corinth* VII, i, pl. 31, 225 (Boulter);  
Broad-bottomed Oinochoe, fr., Syracuse, from Megara Hyblaea grave 21, *MA* I, 813, no. 4 (very like *NC*, no. 167);  
Olpe, New York 96.18.38;  
Alabastron, Athens, from Perachora (Hopper);  
Alabastron, Princeton, *Record of the Museum of Historic Art* II (1943), 11 (Weinberg).

These are works of his late middle and late period. I believe that, as Payne suggested, the alabastra of the Griffin Group (*NC*, nos. 84-6, 88-9) are his, and add two alabastra from Perachora; and suggest that the pointed aryballoi, *NC*, nos. 57 and 58, are his earliest work. The last suggestion may point out where he learnt to draw; his master was the Head-in-Air Painter (see M. Robertson, *BSA* XLIII, 45); see Johansen's remarks, *VS*, 102, on no. 67 (*NC*, no. 57), and compare their range of animals and facile style.

<sup>4</sup> A fairly close parallel is offered by the oinochoe *Corinth* VII, i, pl. 25, no. 186.

<sup>5</sup> Cf. London A 1006, *NC*, no. 35; *NC*, pl. 26, 2.

fairly near to ours, though earlier; his lions and birds are not like. The incisions over the goat's eyebrow have the same form as in the Sphinx Painter's goats, and our lion has some likeness to his (*NC*, pl. 16, 6, 7; 25, 2), though rather in bearing than in details of form and incision. The incision on the legs is like that used by a painter close to the Sphinx Painter in his later style (*NC*, pl. 20, 3 and fig. 11). Lastly, the spacing of the filling ornament and the forms of rosette are very like *NC*, pl. 12, 1 and 8-9 (Sphinx Painter).



FIG. 2.—ATTIC BOWL, DETAIL.

Though we cannot point to any other work of this painter, these comparisons should make his associations clear. The closest parallels, the olpe in Heidelberg and the olpai of the Sphinx Painter's middle period (*NC*, nos. 166-7), are late Transitional. The bowl is a little more developed than these, particularly in the use of incision; the Early Corinthian parallels cited also suggest a date towards 620 rather than one still in the Transitional period.<sup>6</sup>

Similarly close parallels cannot be found in Attic work of the time. No other Attic vase by the same painter is known to me, nor is the work of his Attic contemporaries very like. By way of contrast, compare our lion with an Attic lion of very slightly earlier date, the name-piece of Vlasto's Lion Painter (*BSA XXXV*, pl. 59 a).<sup>7</sup> This shows many of the same stylizations

<sup>6</sup> I see no reason to depart from Payne's dating of Corinthian vases; see R. J. Hopper, *BSA XLIV*, 169 ff., 254 ff. It might be possible to bring down the beginning of Early Corinthian by a few years, to c. 620-615, thus allowing more time for the development through Late Protocorinthian and Transitional. This does not conflict with the evidence of Selinus (*NC*, 24; Hopper, *op. cit.*, 177 ff.). But this is perhaps a vicious precision, suggesting greater accuracy than the evidence allows.

<sup>7</sup> Mrs. Karouzou's kindness enables me to illustrate in PLATE 18 another fine work of this painter, the amphora, Athens 16993, from Vari. She tells me that among the other vases from Vari in the National Museum in Athens is another amphora by the Lion Painter, to which, she believes, the Vlasto fragment belongs. Another work (or perhaps another fragment of one of those vases) is New York 38.11.10 (*BullMetMus XXXIV*, 99 f.; C. Alexander).



as Corinthian Transitional lions; the curl of the nostril, the wrinkles on the brow and upper jaw, the delicate curve round the mouth; note also the filling of incised rosette, of a type which becomes common at Corinth in the Transitional period (*NC*, 31) and is the hall-mark of the subsequent period. But how different the style! The wrinkles are real wrinkles, not decorative patterns; the eyes and teeth are made for business; there is a liveliness lacking in the more conventional lions of most Corinthians of the time.

Our bowl stands at the head of the Corinthianizing current which reached its flood in the second quarter of the sixth century.<sup>8</sup> This current does not set firm until the sixth century. The great painters of the late seventh century, the Nessos Painter and his colleagues whose works are known from the Vari find, hold strongly to the Protoattic tradition. Comparisons may be made between Attic and Corinthian work of the last quarter of the seventh century, and more or less Corinthian influence observed in many Attic works. But nothing at this time even approaches our bowl in its degree of Corinthianizing. Payne has called the Peiraieus amphora<sup>9</sup> 'an attempt to transfer Protocorinthian technique and style to an Attic vase', but it is much more independent than the bowl. Many details of the drawing (e.g. disposition of the filling ornament and many of the forms: the horses with their wispy manes and loose jaws) are pure Attic; and though the broad outline of the style and some of the incised details and filling ornaments resemble Protocorinthian, the cock on the neck is very close to Early Corinthian cocks.<sup>10</sup> In other words, it is related not to one moment only of Corinthian vase-painting, but combines old-fashioned elements and others whose Corinthian parallels are of more recent date. The Corinthian influence in it is then not a matter of transference of style, but an eclectic imitation of some elements of the Corinthian style; and it may be that those elements which go back to Protocorinthian are not taken direct from Corinth, but come through the intermediary of some lost Attic painter, predecessor of the painter of our bowl.<sup>11</sup>

<sup>8</sup> For the sixth-century 'Corinthio-Attic' vases see H. R. W. Smith, *The Hearst Hydria*, especially 252-3.

<sup>9</sup> *AE* 1897, pl. 5-6; cf. *NC*, 346-7; J. M. Cook, *BSA XXXV*, 200-1. Some of Cook's criticism of Payne is, I think, beside the mark; for if, as I attempt to show below, the Peiraieus amphora is influenced by, and imitates both Late Protocorinthian and Early Corinthian, then, so far as it imitates Late Protocorinthian, it is imitating old-fashioned works; and this is not disproved by the existence at the same period of Attic painters who do not imitate old-fashioned or any other Corinthian works.

<sup>10</sup> Compare and contrast *NC*, fig. 20.

<sup>11</sup> A similar time-lag runs through Attico-Corinthian relations. The Peiraieus amphora, a work of c.

620 B.C. (the Early Corinthian character of the cock will not permit an earlier date) recalls Corinthian vases of some twenty years earlier; our bowl, Corinthio-Attic work of c. 620, has its few Attic followers in the decade 600-590; the C Painter's work, of 570-60, bears most resemblance in spirit and in many details to Middle Corinthian models (cf. Kraiker, *AM LIX*, 19; H. R. W. Smith, *The Hearst Hydria*, 268, n. 19; the cup in Bonn mentioned by Smith in *NC*, no. 997). In taking up new subjects, as well as in some points of style, Attic painters are ten or twenty years behind Corinthian (cf. *NC*, 124). The slight reduction of Corinthian dates suggested by Hopper (*BSA XLIV*, 189 ff.; cf. n. 6) would shorten but not abolish this time-lag; and other

The progress of Corinthian influence in Attica may be seen in the group of vases from the Kerameikos grave mentioned in *AA* 1932, 195, by the Kerameikos Painter.<sup>12</sup> There is some Corinthian influence here, without doubt; look at the boars on the mug and jug *ibid.* figs. 4 and 5, the rays, band of sigmas, and rosettes on the former vase; the incision on the legs of the panther is something like that on our lion. But the general Attic quality of the painter is beyond dispute; the Corinthianizing elements are confined to a secondary place. This painter is important, as a close forerunner of the Gorgon Painter; compare their pairs of sphinxes and sirens, and their lotus and palmette chains. More fully Corinthianizing are the two bowls from Vari, *AM* LXII, pls. 43 and 44;<sup>13</sup> but these, though ascribed by Mrs. Karouzou to the early Sophilos, form a not very important part of his ancestry or of the main chain of transmission in Attica.

The growth of feeling for Corinthian style in the late seventh century may well be seen in filling ornament. The variety and exuberance of Protoattic ornament is already declining in the Siren amphora (*BSA* XXXV, pl. 60). Corinthian influence in the Nessos amphora and vases of the time may be seen more clearly both in rosette-forms and in disposition of filling ornament; this is true also of such vases as the lion and leopard krater from Vari,<sup>14</sup> which otherwise owes little to Corinthian. An especially instructive comparison is between two kotyle-kraters very close in style to one another, one in the Kerameikos (*AA* 1934, 209, fig. 8), the other from Vourva (*BSA* XXXV, pl. 55 e). The latter has no other signs of Corinthian influence, and its subsidiary patterns repeat those of the earlier vase; but instead of hooks, diamonds, rosettes, S-spirals, herring-bone, there are only rosettes of a later, Transitional, Corinthian type, and worm-like lines. Elements of Protoattic decoration hardly survive the seventh century; a good late example is the olpe in London from Naukratis, *JHS* 1929, 253, fig. 1.<sup>15</sup> In

comparisons between Attic and Corinthian, together with grave-groups and other complexes of associated material, show that Corinthian dates cannot be much reduced in relation to Attic. The time-lag might be explained as due to the natural lag of the imitator behind his model, but it may be rather that there were intermediaries whose works have not survived. This would also explain the nature of the imitation, detailed and yet selective, thorough-going but consistent with a pure Attic spirit.

<sup>12</sup> See Beazley, *Hesperia* XIII, 43-4. The Kerameikos vases must be later than Kübler placed them in his preliminary report, and belong to the early sixth century; in *AA* 1934, 213, Kübler makes this correction. The style of the figure *AA* 1932, 197-8, fig. 5, and of those not there illustrated, confirms this view of the date (Mr. R. J. H. Jenkins has confirmed my view on this point, and, while allowing that the figure might be earlier than 600, is inclined to date it in the following decade; cf. also V. H. Poulsen,

*From the Collections of the Ny Carlsberg Glyptotek* II, 107). But the sixth-century date is firmly established by the style of the painting; not only the likeness to the Gorgon Painter's early work, but also a comparison of the lion on the jug with a full series of Attic lions; he is later than *NC*, fig. 200, who belongs to the late seventh century.

<sup>13</sup> Beazley, *Hesperia* XIII, 42 (Painter of *A.M.* 62); H. R. W. Smith, *The Hearst Hydria*, 252. R. J. Hopper points out to me that another of the earliest of these Corinthianizing vases, the aryballos from the Kerameikos, *AA* 1934, 207, fig. 7, has some elements in the drawing derived from the workshop of the Head-in-Air and Sphinx Painters. This also is an example of the time-lag discussed above (cf. Hopper, *BSA* XLIV, 171, n. 35).

<sup>14</sup> See *Friends Nat. Mus.* 1934-5, fig. 8; *AJA* 1937, pl. 8; *AA* 1940, 129-30, fig. 6 (there ascribed by Mrs. Karouzou to the Nessos Painter).

<sup>15</sup> Another early sixth-century example is the kotyle-krater Munich 7409; see below p. 198 and n. 18.

shape and style this is closely bound with the group to which the Gorgon Painter's *olpai* belong. The Protoattic characteristics of this, the earliest of the group, should warn us against giving too much weight in its development to Corinthian influence.



FIG. 3.—ATTIC KOTYLE-KRATER, MUNICH 7409.

Considering his quality, it is difficult to observe our painter's influence in Athens. Direct descendents are few. One is the kotyle-krater Munich 7409, a bad work which combines divers elements (FIG. 3).<sup>16</sup> The shape is Attic;<sup>17</sup> the back is decorated with the loops familiar in Protoattic, but now very old-fashioned.<sup>18</sup> The sphinx has at first sight an Attic look, but does not find exact parallels; its very low forehead is out of date. The swan is comparable to our bird, for all its coarseness; its incision differs only in having two lines instead of one across the back of the head, and in the incision of the tail; the shape of the wing is the same, though ours is more carefully

<sup>16</sup> Professor Beazley introduced me to this vase, and Dr. H. Diepolder kindly supplied information and photographs.

<sup>17</sup> Cf. *BSA* XXXV, 186, 199.

<sup>18</sup> They occur also on the contemporary bowl in Leipzig, *AA* 1923-4, 52, no. 3.

feathered. The lion under the handle of the Munich vase is in some respects like ours, especially in the incision of body and legs; he has been contaminated with a lion akin to the Polos lions, and his face suggests something between Polos and a bad version of the Gorgon Painter. The animals of the lower frieze are unimportant. The filling ornament is Corinthian, the rosettes those of Transitional vases; in this respect also the Munich vase is a descendent of our bowl. It must be as late as 590-80, as the lion shows,

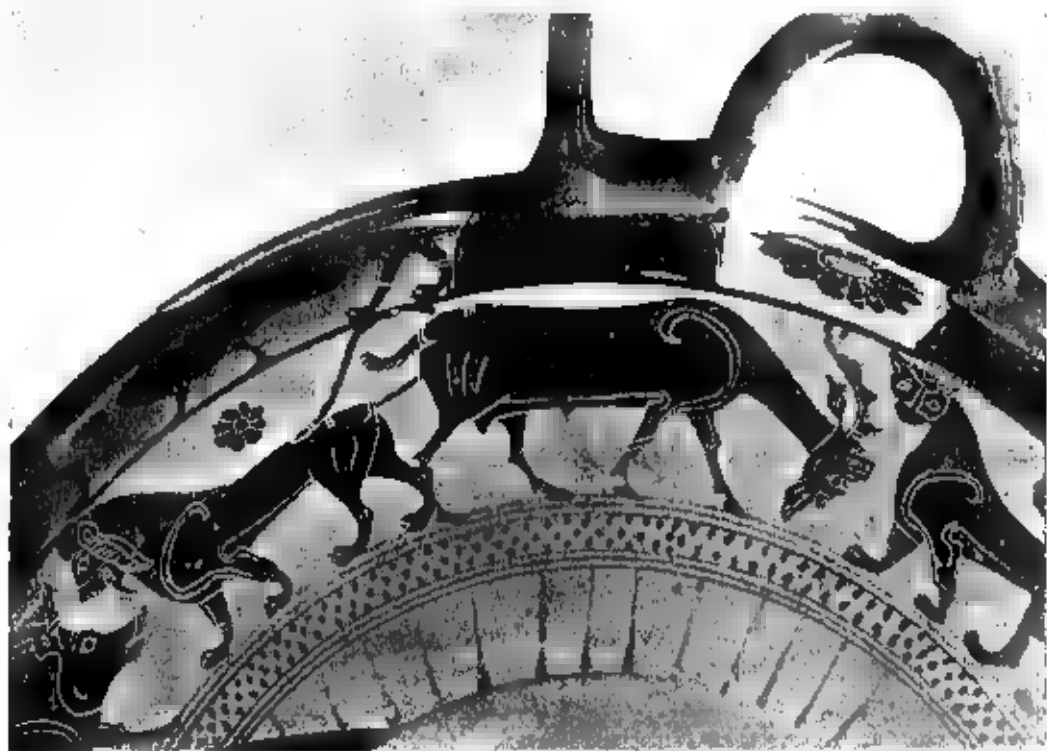


FIG. 4.—ATTIC LEKANE, ATHENS 296.

and the animals of the lower frieze agree with this date. Its painter has learnt (though not very much) from our master, and has also picked up something of later Corinthian influence and some elements of Attic tradition.

Some other works of the same time show the same influence in details: for instance, the goat under the handle of the lekanis Athens 296 (FIG. 4).<sup>19</sup> It is a skinnier animal, but the head is like ours, notably the lines above the eyebrow, the beard, and the knobs on the horns. The lion next door is somewhat like ours, especially in the incisions on shoulder and forelegs, but these

<sup>19</sup> *AM* LXII, pl. 45; *Hesperia* XIII, 45, no. 5 and pl. 5. (= KX Painter).

details are not rare in Attic. For the stylization of the goat's head compare the same painter's stand Athens 16183;<sup>20</sup> and the fragment from Pharsalos signed by Sophilos.<sup>21</sup>

The detailed resemblances between Sophilos' work and our bowl are few. It is dangerous to look for influence in more general points. There is nothing very individual about the arrangement of different animals in a frieze. One might be tempted to compare the bearing of various animals, but such general resemblances need not be due to imitation. The works of other Corinthian painters of the period with the same spirit must have been well known in Attica. Indeed, it is possible that others, whether from the same workshop or not, followed our painter to Athens. This is favoured by the slightness of his provable direct influence. The works which might show his immediate influence have not been uncovered, or, if they have, are unknown to me; the vases already quoted are not very close. But none of the works of the late seventh century which show Corinthian influence is related to this bowl, so it seems that he did not have great influence in Attica. The hypothesis of a time-lag might help to explain this. At the time of his transference from Corinth, the Protoattic tradition was still very strong. Twenty years or so later, when Corinthian influence was more widely received in Athens, there was a new style to follow. Our painter may have ceased working, died or returned to Corinth; or, cut off from his fellows in Corinth, he may have failed to develop. In that case, the progressive Attic painters would prefer up-to-date Corinthian masters to one who appeared to them behind the times.

Solon offered Athenian citizenship to immigrants who came to practice a trade.<sup>22</sup> It has often been supposed, and is likely enough, that among such immigrants were potters from Corinth. Though it is not possible to assert that we have any of their works, the relations between Attic and Corinthian painting in the early sixth century could hardly be explained without assuming import of potters as well as pots. This was no new thing in Solon's time, for we now have an unnamed Corinthian painting a vase at Athens a generation earlier. It is worth noticing that he is a colleague of the man who, as much as any other, transformed Corinthian vase-painting into the Early Corinthian style. The Sphinx Painter was an enterprising, one would suspect essentially commercial, artist, whose wares have a wide distribution.<sup>23</sup> It is not surprising that one of his associates should make

<sup>20</sup> *JdI* 1903, 137, fig. 9; cf. S. Karouzou, *AM* LXII, 134; Beazley, *Hesperia* XIII, 45, no. 10 (KX Painter).

<sup>21</sup> Athens 15499. *Mon Piot* XXXIII, 44, fig. 1 and pl. 6; *AM* LXII, pl. 52; Beazley, *Hesperia* XIII, 50, no. 16.

<sup>22</sup> *Plut.* Solon 24.

<sup>23</sup> In Corinth, Perachora, Aegina; Sicily (Megara Hyblaea, Gela); Etruria and Carthage; works of other associates have been found in Rhodes (*MC*, no. 90).

the move to Athens. He may not have been the first. The Nessos and Peiraieus Painters have, as Payne and Beazley have pointed out,<sup>24</sup> elements derived from a Protocorinthian style which had gone out twenty years before their time. They were certainly not consciously archaizing, and more recent models were available. Perhaps they learnt from some painter who had himself learnt in a Protocorinthian workshop, but had not absorbed the influences which had since changed the Corinthian style; that is, from some one whose connexions with Corinth were cut in the middle of the third quarter of the seventh century. But I do not wish to push the time-lag hypothesis too far, in default of direct evidence which may at any time appear.

Certainly in this period—with Late Protocorinthian, and the successors of the Kynosarges Painter at Athens—Attic and Corinthian vase-painting begin to draw together. Most Middle Protoattic follows a very different line from Protocorinthian (the Ram Jug Painter has more kinship with Protocorinthian than other Attic painters) and the Kynosarges amphora is no exception. After Kynosarges must come Acropolis 367,<sup>25</sup> which is somewhat like the Thermon metope *AM* 1914, pl. 13. But the general resemblance in this and other works of the period<sup>26</sup> does not establish imitation on the part of Attic painters. In another field, direct imitation of Protocorinthian work during this period is shown in the clay head of Attic manufacture and Protocorinthian style from the Acropolis, published by Jenkins.<sup>27</sup> In the political field, Kylon's attempt at tyranny soon after 640,<sup>28</sup> with the support of his father-in-law Theagenes tyrant of Megara, may suggest that Athens was being drawn closer to the cities of the Isthmus.

By the middle of the seventh century Attica had certainly recovered from the decline in the earlier part of the century.<sup>29</sup> The complex grave-monuments of the Kerameikos and Vari show that the dead enjoyed a good deal of luxury. These remains, taken with what we know of Attica in the succeeding period, present a picture of a wealthy aristocratic society.<sup>30</sup> Its wealth was not based on commerce and colonial enterprise, as was that of

<sup>24</sup> Beazley, *ABS*, 10 ff.; Payne, *NC*, 346 f.

<sup>25</sup> *BSA* XXXV, pl. 55 b. Hardly by the Ram Jug Painter, as J. M. Cook suggests (*op. cit.*, 194), and later than the date which his comparison implies. It appears to me more advanced than the Kynosarges amphora; the breadth of head, and the curve of the top and back, compare with 'Agamemnon' on the fragment *BSA* XXXV, pl. 54 f. These two, and the work of Gebauer's 'Frauenmaler' (*CVA Berlin* I, p. 7) I suppose to be a little earlier than the Lion Painter (see above, p. 195 and n. 7). The vases which Cook puts into the gap between Kynosarges and Nessos, as he says, do not fill it; accepting the date c. 640 for the Kynosarges amphora (Cook, *op. cit.*, 201; D. Burr, *Hesperia* II, 636), the gap must cover more than twenty years, and the vases which Cook puts into it belong to the second half of this period,

and are more closely related to Peiraieus and Nessos than to Kynosarges. Cook remarks the resemblances of pieces from the gap with Transitional Corinthian, but they seem to correspond in time with later rather than earlier Transitional.

<sup>26</sup> Cf. Cook, *op. cit.*, 201.

<sup>27</sup> Acropolis 816; Jenkins, *Dedalic*, pl. 6-8 and pp. 50-1.

For an Attic terracotta head of c. 600 which has very close Corinthian relations, see *Hesperia* VI, 378, fig. 44; cf. Poulsen, *From the Collections of the Ny Carlsberg Glyptothek*, II, 107 (cf. 87 ff.).

<sup>28</sup> For the date see F. E. Adcock, *CAH* IV, 27, 661; F. Jacoby, *Atthis*, 186 ff., 271, n. 219.

<sup>29</sup> For the evidence for this decline see *BSA* XXXVII, 83 ff.

<sup>30</sup> See G. M. A. Richter, *Metamorphosis* V, 20 ff.

Corinth. The products of Attic potters are contrasted with Protocorinthian vases in their distribution<sup>31</sup> and also in their size and purpose. Many of the finest Protoattic vases were made for funerary use; nearly all of them are large vases, not of everyday use.<sup>32</sup> It may not be too fanciful to see in the contrast between the large pieces of splendid grave-furniture and the second-rate little vases of everyday use the germ of that division between rich and poor which became so acute by Solon's time.

However that may be, the fact that a Corinthian vase-painter worked at Athens a generation before Solon's legislation, coupled with the increasing signs of Corinthian influence in Attic vase-painting of the time (influence which may be partly due to the establishment at Athens of other Corinthians), should have some bearing on the state of Attica in Solon's time. It would take too long, and draw us too far from the bowl which is my starting-point, to examine the complex problems of Solonian economics; but the appearance of a Corinthian at Athens is one further chain in the argument, which the evidence of Attic vases, their style and distribution, strongly reinforces, that the distress which Solon had to relieve was due not solely to poverty, but to economic growing pains.

T. J. DUNBABIN

<sup>31</sup> J. M. Cook, *op. cit.*, 204.

<sup>32</sup> Contrast the funerary amphorae with the plain vases in which oil was exported (R. S. Young, *Late Geometric Graves*, 179, 210). These range as far as

Sicily and Egypt. But few of them are older than the last quarter of the seventh century, when, perhaps, export of oil began to develop.

## EXCAVATIONS AT MYCENAE, 1939

(PLATES 19-25)

### INTRODUCTION

The following is the first instalment of the report of the excavations at Mycenae in the summer of 1939, undertaken by an expedition, largely from Cambridge, under the aegis of the British School at Athens. A preliminary account of the main results appeared in the *Journal of Hellenic Studies* for 1939, 210 ff. The following students of the British School at Athens took part in the work at Mycenae: Miss Helen Thomas and Miss Vronwy Fisher of Girton College, Mr. F. H. Stubbings, Fellow of Emmanuel College, and Mr. Arnold Silcock, F.R.I.B.A. Other members of the expedition who undertook various parts of the work were Mrs. Alan Wace, Mr. Joseph Last, Mr. Michael Fuller and Mr. Colin Kraay of Oxford, and Dr. and Mrs. F. W. Goethert of Berlin. Miss Elizabeth Wace was actively present throughout. Orestes Dasis was foreman and Ioannis Katsarakis was mender. The expedition was much indebted to the American School at Athens for allowing Mr. Wulf Schäfer to come to do the surveying and for the loan of equipment and other help. Mr. Gerald Young, Director of the British School, and Mr. T. J. Dunbabin, Assistant-Director, assisted in many ways. The Greek Government, which afforded us every facility, was represented by the Ephor of Argolis, who with the local police authorities smoothed all problems.

This report was written in the spring and summer of 1940 in Athens from my notes and from those of Miss Fisher, and was checked over at Mycenae in August 1940. Since then Mr. M. S. F. Hood, Student of the British School at Athens, has read over the manuscript on the site at Mycenae and in the museum at Nauplia in the late summer of 1948. To him are due many corrections and observations, especially on the pottery. The manuscript was revised by my wife and myself at the Institute for Advanced Study at Princeton in the autumn term of 1948, when several additions were made. The whole has subsequently been further revised and edited by Mr. F. H. Stubbings, who also prepared the plans, on the basis of Mr. Schäfer's survey.

It has proved impossible to make the report as complete as was at one time hoped. The small finds which were deposited in the National Museum at Athens are not yet available for study and therefore cannot be described or illustrated here. Many of the vases have been identified by Mr. Hood in the Nauplia Museum, but several could not be found, and the reader will note that many details are in consequence missing. This is due to the evacuation of



the museum during the war and to the loss of the stratigraphic record of the Mycenae excavations when the basement room of the old museum at Nauplia, in which it was kept, was converted into an air-raid shelter. It is hoped to supplement this report by a later one including the small objects and any others of the vases which may subsequently be recovered at Nauplia. It has not, however, been thought worth while to delay publication any longer. Further reports on the other areas excavated in 1939 are in preparation and it is hoped that they will appear in later volumes of this *Annual*. A brief account of all these finds is included in my general book on Mycenae, published by the Princeton University Press in 1949.

A. J. B. WACE

### I. THE PREHISTORIC CEMETERY

During the excavations of 1920-23 at Mycenae particular attention was paid to the area of the Royal Shaft Graves and the Grave Circle in the hope of tracing the course of their history. From an exhaustive review of the evidence, both that previously available and that derived from those excavations, it appeared that the Shaft Graves formed part of a prehistoric cemetery which had been in use since Middle Helladic times and therefore preceded the building of the Lion Gate and Cyclopean walls, the Granary, the Grave Circle, and the houses immediately to the south of the latter. There is no need to repeat or even to summarise here the details of the conclusions, for they, together with the archaeological evidence on which they are based, are given in full in the report of the excavations of 1920-23.<sup>1</sup> The whole space occupied by the fortifications and buildings just mentioned (see the plan FIG. 1) is marked by the presence of soft rock in which the Shaft Graves were dug. On the east this area is bounded by a line drawn from the east side of the Lion Gate and under the Ramp to the east side of the Ramp House. Eastwards of this line rises the slope of hard limestone of which most of the Citadel is composed.<sup>2</sup> Westwards the hill slopes downwards, and wherever the rock has been exposed, either within or without the Cyclopean walls, it is the same soft rock as that of the Shaft Graves. The dividing line between the soft rock and the hard limestone can be seen outside the Lion Gate at the foot of that sector of the Citadel wall which runs from the east side of the Lion Gate northwards to the northwest angle of the enceinte and is constructed in ashlar work in conglomerate.<sup>3</sup> As pointed out in the report of our earlier excavations this is the nearest area to the summit of the Citadel where it was possible to dig out graves in the rock. A similar but much smaller area, just outside the Postern Gate, was explored in 1939 and several rock cuttings,

<sup>1</sup> *BSA* XXV, 103 ff.

<sup>2</sup> *Ibid.*, pl. I.

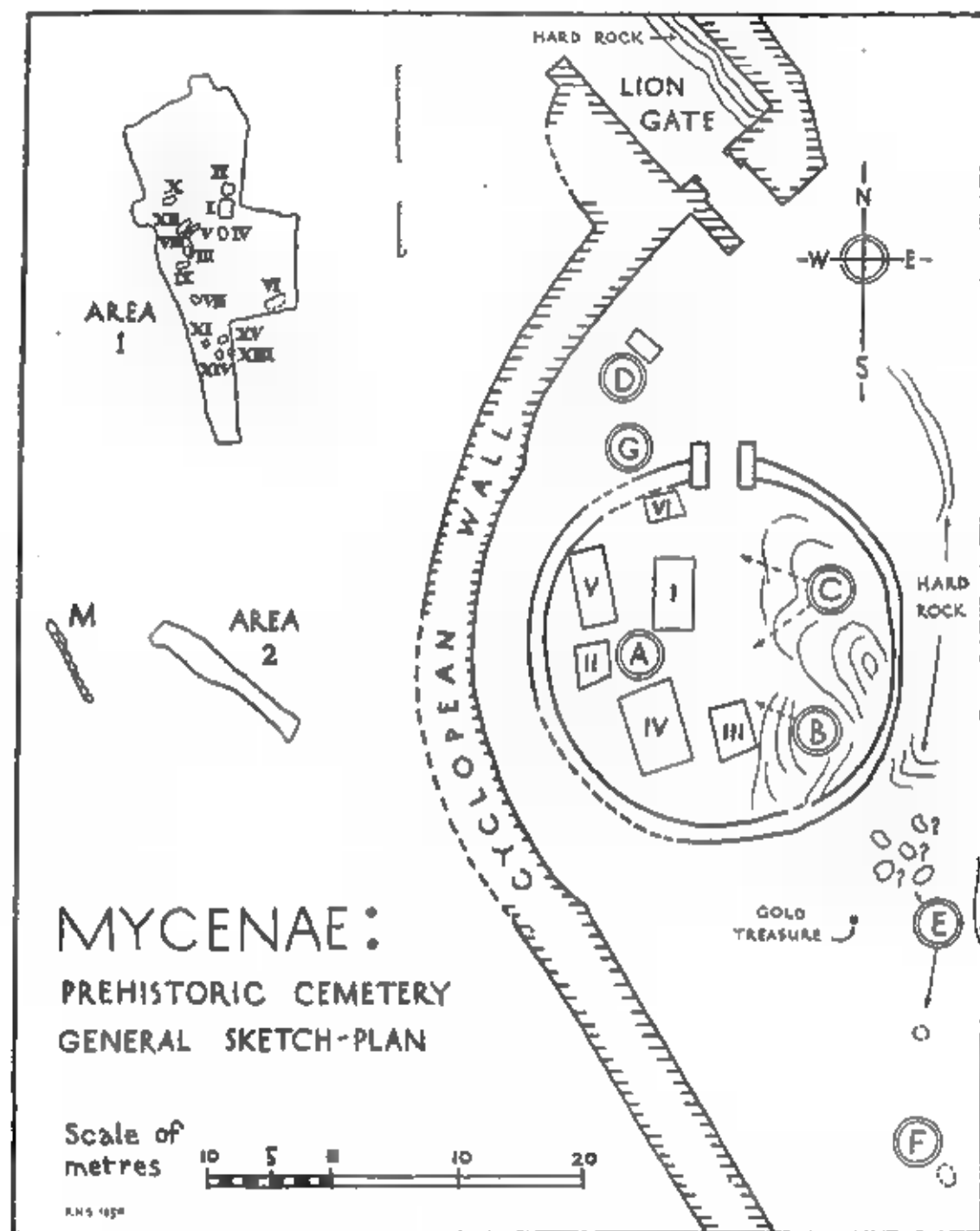


FIG. 1.

probably plundered graves, were found, but the pottery in them was mostly Hellenistic. Only a little Mycenaean ware (L.H. III) was found.

Within the Citadel walls the evidence for the existence of the Prehistoric Cemetery comprises the following graves or groups of graves (indicated by corresponding letters on the plan, Fig. 1):

- A. The six Shaft Graves themselves, which are obviously one group and the last resting-places of the members of a royal family.<sup>3</sup>
- B. The skeletons of men found by Schliemann on the slope of the rock by what he called the mouth of the Third Shaft Grave. With these he says he found five Middle Helladic vases.<sup>4</sup> It is sometimes thought that these skeletons and vases come from M.H. graves which were destroyed when the Third Shaft Grave was dug.<sup>5</sup> It seems more likely, however, that these burials were intact when Schliemann found them. The vases were unbroken and Schliemann implies that the skeletons were complete, although the bones and skulls were so much perished that the skulls could not be extracted entire. Had the bones and skulls lain in disorder, so acute an observer as Schliemann would certainly have noticed the circumstance.
- C. The four graves found by Stamatakis in the eastern part of the Grave Circle.<sup>6</sup>
- D. The plundered Shaft Grave, probably of L.H. II date, found underneath the floor of the east basement of the Granary in 1920.<sup>7</sup> Since the gold discs, which probably once adorned a dress, suggest that there was a woman buried in this grave, and the pieces of boar's tusk from a helmet suggest a man, it may have been the grave of a husband and wife of a noble family.
- E. The three certain M.H. graves found beneath the Ramp House,<sup>8</sup> and the three possible graves beneath the same house.<sup>9</sup> The latter are shallow rock cuttings under the north wall of the megaron of that house. They were found empty, but may well be graves which had been disturbed when the house was built.
- F. The Middle Helladic grave underneath the east room of the South House.<sup>10</sup>
- G. Outside the Grave Circle between Shaft Grave VI and the West Basement of the Granary there was apparently another rock-cut

<sup>3</sup> Karo, *Schachtgräber*, 1 ff.

<sup>4</sup> Schliemann, *Mycenae*, 162 ff. There are really only four vases, Karo, *op. cit.*, 16, 63, nos. 157-160. In the National Museum at Athens there are two other unbroken Middle Helladic vases from Schliemann's excavations (nos. 1110 and 1305) which may well have come from M.H. graves; Wace, *Mycenae*, 61,

note 5.

<sup>5</sup> Karo, *op. cit.*, 16.

<sup>6</sup> Tsountas-Manatt, *Mycenaean Age*, 97.

<sup>7</sup> *BSA* XXV, 53 ff.

<sup>8</sup> *BSA* XXV, 76, 118.

<sup>9</sup> *BSA* XXV, 78.

<sup>10</sup> *BSA* XXV, 94.

grave. The rock seems to be cut vertically for a depth of about 1.25-1.40 m. where there is a levelled space. There are traces of stone walling on three sides. This was first explored by Tsountas, then by us in 1920, and in 1948 by Dr. Papademetriou. Owing to these successive disturbances it is now difficult to be sure about the shape of this probable grave.

In addition Tsountas<sup>11</sup> noted several shallow rock cuttings to the south of the Grave Circle which may be, as he suggested, graves that had been disturbed when the houses were built over this part of the Prehistoric Cemetery.

Further the Golden Treasure found by Schliemann's surveyor close to the northwest corner of the Ramp House lay according to his report in what appeared to be a Shaft Grave which had been disturbed.<sup>12</sup> In view of what we now know, that this whole area had been a prehistoric cemetery, it is extremely likely that this treasure was part of the contents of a grave. The other view that it is a cache of plunder looted from graves in this cemetery seems, to me at least, less probable. Schliemann's plan and description incline me to the belief that there was once here a rich shaft grave which was partly ruined and plundered when the Ramp House was built.<sup>13</sup> The treasure has now at last been adequately published by Miss Helen Thomas who has fully discussed the whole problem.<sup>14</sup>

Again in the space at the foot of the supporting wall of the ring of slabs of the Grave Circle on the west there is an artificial cutting in the rock now filled with small stones as a bedding for the base of the Cyclopean wall.<sup>15</sup> This cutting might conceivably be that of a grave which was discovered and destroyed when the wall was being built.

It will be observed that the graves in this part of the Prehistoric Cemetery now within the Cyclopean walls range in date from Middle Helladic, as shown by those below the Ramp and South Houses and those found by Schliemann near the Third Shaft Grave, through Late Helladic I, the Shaft Graves themselves, to Late Helladic II, the Shaft Grave below the Granary. No L.H. III graves have yet been discovered in this part of the Prehistoric Cemetery.

In conversation with me Tsountas often expressed his conviction that the Prehistoric Cemetery would be found to have extended outside the Lion Gate and the Cyclopean walls, that is to say to the north and west of the Grave Circle. When the excavations of 1920-23 showed definitely that the

<sup>11</sup> Tsountas-Manatt, *Myc. Age* 114.

<sup>12</sup> Schliemann, *Mycenae*, 330 ff., pl. G.

<sup>13</sup> *BSA* XXV, 119.

<sup>14</sup> *BSA* XXXIX, 63 ff.

<sup>15</sup> *BSA* XXV, 105, pl. I, 63.

Lion Gate and Cyclopean walls had been built long after the Shaft Graves were dug and that, after the Royal Shaft Graves had been enclosed as a sacred area, the rest of the cemetery round them had been given over to building purposes, this conviction of Tsountas seemed more than ever likely to prove correct.

In the report of the excavations of 1920-23 the belief was expressed that the Prehistoric Cemetery extended outside the Cyclopean walls to the west.<sup>16</sup> This opinion was shared by Karo.<sup>17</sup> Further study of the problem made me feel sure that exploration of the area immediately outside the Lion Gate to the west and north would result in the discovery of more graves belonging to the Prehistoric Cemetery. Accordingly the testing of this opinion was one of the main objectives of the excavations of 1939.

Just below the Lion Gate to the northwest Tsountas had cleared a small space round some later walls and revealed the surface of the soft rock not far below them. He never published any report of this work, and since the rock showed clearly we naturally chose this area as a suitable place where the rock could be examined carefully and in detail. During the exploration of this region and the parts immediately adjacent to it to the north and south we found fifteen graves, all cut in the soft rock, and as they are the earliest remains discovered in this area it will be convenient to begin with them, and then proceed to trace the subsequent history of this part of the Prehistoric Cemetery from a study of the walls and pottery and other relics found in the course of our excavations.

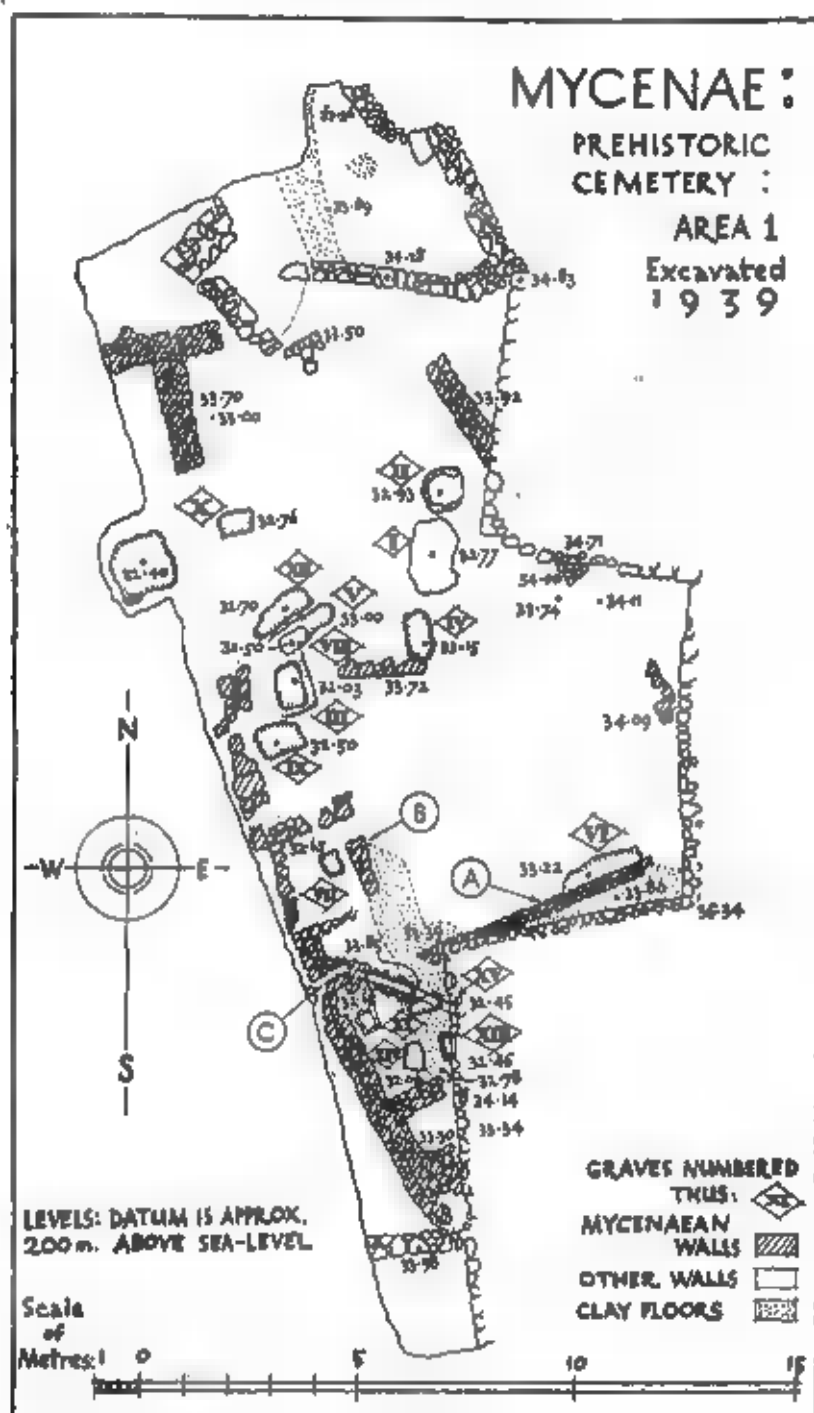
The following is a list of the graves, and the description of each is accompanied by a brief catalogue of its contents. All the graves will be found marked on the plan (FIG. 2) by Roman figures I to XV.

I. Grave, rock-cut, irregular. L. 1.60 m., W. 1.00-1.10 m., D. 0.60 m.

The covering slabs were missing. The grave had been disturbed and its original contents had been removed. There were no human bones in it. The presence of sand and strata of muddy earth in it gave the impression that the grave had been cleared and left open, and had then been refilled by earth and sand trickling and washing into it during rain storms. In the earth were an iron nail, a piece of modern china, some Hellenistic sherds and a few miscellaneous M.H. (Minyan and Matt-painted), and L.H. II (one Ephyræan), and L.H. III sherds. The presence of the iron nail and of the china suggests that the grave may have been found by Tsountas and cleared by him and then left open to the weather.

<sup>16</sup> *BSA* XXV, 118.

<sup>17</sup> *Schachtgräber*, 16.



## II. Grave, rock-cut, irregular. Di. 1.00 m., D. 0.60 m.

The covering slabs were missing. The grave had been disturbed and its original contents had been damaged and partly removed. A few fragments of human bones were found and several examples, all much broken, of Middle Helladic pottery. The more important pieces are catalogued below (nos. 1-3). Of the other seven fragments four were of Grey Minyan ware.

## FINDS

(Note.—The four-figure numbers in the left-hand margin are the inventory-numbers in the Nauplia Museum. The numbers in brackets are those of the excavators' inventory.)

## Pottery

- 3981 1. Jug, handle and neck broken off and missing. There is a hole through the side  
(198) above the stump of the handle, perhaps for the insertion of the upper end of the handle,<sup>18</sup> or possibly for suspension. H. 0.14 m., greatest Di. 0.135 m., Di. of base 0.05 m.

The clay is pink, covered with a slip of pale buff with a greenish tinge and a slight polish. The original shape of the jug is hard to determine; it seems reminiscent of the late E.H. 'tankard,'<sup>19</sup> but for an example of similar fabric we may compare a M.H. jug from the Argive Heraeum.<sup>20</sup> Yellow Minyan, M.H. (Pl. 20. 1.)

2. Goblet, fragment, showing part of the body and the lower root of the handle. H. 0.178 m., W. 0.198 m.

This is a fragment of a Grey Minyan goblet like the examples from Korakou<sup>21</sup> and Eutresis.<sup>22</sup> The clay is grey and has a well polished slip of the same colour. M.H. (Pl. 20. 4.)

3. Goblet or bowl, fragment from rim. H. 0.175 m., W. 0.15 m.

The biscuit is red and is covered with a black highly burnished slip. The rim is horizontal<sup>23</sup> and suggests a metal prototype. Below the rim on the body are two raised metallic lines. This is undoubtedly a piece of a goblet or bowl of the so-called Argive Minyan ware of M.H. date, which is, however, better called Black Burnished Ware and regarded as a version of the Red Burnished Ware.<sup>24</sup> M.H. (Pl. 20. 3.)

## III. Grave, shaft, rock-cut, regular. L. 1.00 m., W. 0.65-0.70 m., D. 0.85 m. (Pls. 19 (a), 21 (b).)

This is a well-cut shaft grave. All along the four sides at the top there was a rock-cut ledge obviously for the insertion of the covering slabs which are missing.<sup>25</sup> On the north and west where the rock slopes away there is little if any ledge. In any case on these two sides the present state of the rock does not allow any accuracy in measurement, but what ledge there was was certainly

<sup>18</sup> For this method of attaching handles cf. Goldman, *Eutresis*, 120 and fig. 164.

<sup>19</sup> E.g., from Gonia, Blegen, *Korakou* 11, fig. 11.

<sup>20</sup> Blegen, *Prosymna*, fig. 75 no. 1202.

<sup>21</sup> Blegen, *Korakou*, 15, fig. 20.

<sup>22</sup> Goldman, *Eutresis*, 133 ff., figs. 183-5.

<sup>23</sup> Cf. Blegen, *Korakou*, 17, fig. 23: 1, 2, 4.

<sup>24</sup> For examples from Argos see BCH XXX (1906), 12 and figs. 9, 10.

<sup>25</sup> At Prosymna Grave XVII, which was Middle Helladic, had a rock-cut ledge along the sides at the top; Blegen, *Prosymna*, 41.

shallow and slight. On the south and east sides, where the rock rises, the ledge is plainly cut. On the east it is 0.30-0.40 m. deep and 0.20-0.25 m. wide and on the south it is 0.15-0.25 m. deep and 0.15 m. wide. The manner in which this shaft was cut down into the sloping surface of the rock closely resembles the manner in which the Second and Fifth of the Royal Shaft Graves were cut down into the rock. This grave had been disturbed, but seven unbroken vases and some small objects were found in it, which are without doubt part of its original contents (Pl. 21 (b)).

Just below the top of the rock, almost in the very centre of the tomb, was a fragment of sheet gold (no. 8). As the excavation proceeded downwards some animal bones and M.H. sherds (mostly Grey Minyan) were found at about 0.30 m. below the rock edge. At about 0.75 m. from the top three beads (one of amber, and one each of blue paste and amethyst) were found (nos. 10, 12, 13) and at this level along the west side of the tomb appeared the tops of a row of seven intact vases (nos. 1-7) undisturbed and *in situ*. Just to the east of vase no. 3 were found lying almost on the rock floor five gold ornaments (no. 9) and four beads, two of amethyst (no. 12) one of blue paste (no. 10) and one of gold (no. 11). These with the vases, and the beads found at a higher level, presumably belong to the original contents of the tomb, for the vases had every appearance of being quite undisturbed and at the same level towards the south end of the grave were one or two fragments of human bones. Probably the grave was discovered when, after the Lion Gate and adjoining bastion and walls were built, this area was occupied by small L.H. III buildings. The covering slabs were removed and the plunderers dug out the skeleton and robbed it of most of its ornaments. The vases had no value for them and were left. The beads and ornaments found were overlooked or dropped by them.

## FINDS

### A. Pottery

3976  
(236)

1. Cup, or small bowl, with plastic duck's head on rim and a small tail-like projection on opposite side acting as a spout; between them on one side is a vertical ribbon handle. Di. 0.09 m., Di. of base 0.038 m., H. (with duck's head) 0.08 m.

Clay buff, with a smooth buff slip. It is roughly painted with three bands of streaky black-brown paint above the base and an inverted wave pattern at the rim; the handle is barred; the duck's neck is fringed and looped, its bill is barred, and its eyes bulge. L.H. I. (Pl. 21 (a), 4.)



There seems to be no exact parallel for this vase, though small hand-made askoi in the shape of a duck are not uncommon in L.H. III. Apart from the duck's head and tail, the cup is of recognised L.H. I type (Furumark 221).<sup>26</sup>

- 3974 (237) 2. Goblet, one high-swung vertical ribbon handle. Di. 0.09 m., Di. of base 0.045 m., of bowl 0.095 m., H. with handle 0.118 m., H. of bowl 0.081 m.

It has a smooth light buff slip. The paint shades from red to red-brown. The foot and handle are painted in solid colour; round the lower part of the bowl are two plain bands and above an inverted wave pattern edged with a wavy line; the rim is painted inside and out. L.H. I. (Pl. 21 (a), 5.)

The shape (Furumark 270)<sup>27</sup> is characteristic of L.H. I, and in a more refined variety, of L.H. II. Nos. 4 and 6 below are similar. The decoration is closely similar to that on a jug from Korakou.<sup>28</sup>

- 3978 (238) 3. Askos, loop handle from top of body to middle of spout. H. 0.065 m., Di. 0.085 m.

It has a smooth slip, light buff in colour. The paint is black-brown and streaky. A band roughly painted surrounds the base, and round the centre of the body are two more. On the shoulder is a simple running spiral with small dots, one or two in each angle, above and below the tangents. The handle has a rough line of paint and the spout is painted in solid colour inside and out. L.H. I. (Pl. 21 (a), 6.)

L.H. I examples of this shape are few. The nearest parallels are from chamber tombs at Mycenae<sup>29</sup> and Demetrias.<sup>30</sup> Of these, one of the Mycenae examples has an argonaut pattern on it, that from Demetrias the double axe. All three are perhaps rather later than the present vase, the spiral decoration of which is best compared with that on squat one-handled jugs of similar date.<sup>31</sup>

- 1975 (239) 4. Goblet, one high-swung handle. H. with handle 0.116 m., Di. 0.093 m., Di. of base 0.045 m., H. of bowl 0.09 m. Dimension of bowl at greatest width 0.097 m.

There is a smooth slip, buff in colour. The paint is black-brown, streaky and rather worn. On the edge of the base is a band, and on the underneath of the base another band. A thick band encircles the stem and three thin bands the lower part of the bowl. There is an inverted wave pattern directly below the rim which is painted in solid colour in and out. The handle is barred. L.H. I. (Pl. 21 (a), 7.) Compare nos. 2 and 6.

- 3979 (240) 5. Feeding-bowl, one high basket handle and a short bridged spout. H. without handle 0.09 m., H. with handle 0.14 m., Di. 0.10 m., Di. of mouth 0.065-0.070 m. Di. of base 0.045 m.

There is a slip, deep buff in colour, and the paint is brownish black. The base is painted in solid colour. The body shows a design of four flower-buds with groups of three thin leaves between them, all waving in the breeze. Above each flower-bud is a double wavy line. The spout, neck and handle are painted in solid colour, but the paint on the handle is worn. L.H. I-II. (Pl. 21 (a), 1.)

The shape (Furumark 158) is rare, though a development of it (Furumark 159) is common in L.H. III. There seem to be only two closely similar vases known, from graves at Korakou<sup>32</sup> and Eleusis.<sup>33</sup> Perhaps the shape was designed specifically for funerary use.

- 3973 (241) 6. Goblet, one high-swung handle. H. without handle 0.070 m., H. with handle 0.093 m., Di. 0.075 m., Di. of base 0.04 m.

There is a smooth buff slip and the paint is black-brown and streaky. There is a band round the base and another round the stem, and three thin bands

<sup>26</sup> *Mycaean Pottery*, fig. 15. Exc., Blegen, *Pragmna*, fig. 655, no. 489; Mylonas, *Προϊστορικὴ Ἑλλάς*, fig. 102, no. 360.

<sup>27</sup> *Op. cit.*, fig. 16. Exc., Blegen, *Pragmna*, fig. 110, no. 215; Wace, *Ch. Tombs*, pl. XXXIV, 16, 17.

<sup>28</sup> Blegen, *Korakou*, fig. 66.

<sup>29</sup> Wace, *Ch. Tombs*, pl. XXVII, no. 10; pl. XLVIII,

no. 4.

<sup>30</sup> *AM* XIV, pl. XI, 1.

<sup>31</sup> E.g., Blegen, *Pragmna*, figs. 157, top right, and 652, no. 343.

<sup>32</sup> Blegen, *Korakou*, fig. 73, L.H. II.

<sup>33</sup> Mylonas, *Προϊστορικὴ Ἑλλάς*, 129 fig. 108, left, L.H. II.

round the lower part of the body. The rim is painted inside and out in solid colour and directly below on the outside is a running line of small loops with a dot in the centre of each. This is a M.H. pattern. There are diagonal bars on the handle. The paint is poor and worn. L.H. I. (Pl. 21 (a), 2.) Compare nos. 2 and 4.

3982  
(242)

7. Jug, small, with cutaway neck and loop handle. H. 0.055 m., Di. 0.055 m.

There is a smooth buff slip and the paint is brown. There is a band round the base and two bands round the middle of the body. There is a simple running spiral on the shoulder. The neck is painted inside and out in solid colour and so is the handle, the paint of which is rather worn. L.H. I. (Pl. 21 (a), 3.)

The shape preserves M.H. traditions, but is known in L.H. I from Korakou and elsewhere.<sup>34</sup> For the decoration compare the askos, no. 3 above.

#### B. Miscellaneous Objects

8. Gold, sheet, fragment. L. 0.015 m.

9. Ornaments, gold, beehive shape, five. H. 0.007 m., Di. 0.017 m. These are hollow and conical, and much resemble bee skeps in shape and appearance, because of the raised spiral rings round them. They are the gold prototypes of a well known Mycenaean ornament which has hitherto been found only in glass, as in examples from Mycenae,<sup>35</sup> Dimeni,<sup>36</sup> Menidi,<sup>37</sup> Spata,<sup>38</sup> and elsewhere. All of these are probably of L.H. III date. One of the steatite moulds from Mycenae<sup>39</sup> shows a mould for making this type of ornament, probably in glass or paste.

10. Beads, paste, blue, two. H. 0.006 m., Di. 0.006 m. These are of plain spherical shape.

11. Bead, gold, one. H. 0.002 m., Di. 0.002 m. This is hollow and made of two convex pieces of gold soldered together, and is of a plain spherical shape.

12. Beads, amethyst, three. H. 0.005 m., Di. 0.007 m. These are of a plain spheroid shape.

13. Bead, amber, fragment only. H. 0.004 m. This is too much broken and decayed for the shape to be determined.

- IV. Grave, rock-cut, irregular. L. 1.10 m., W. 0.60-0.70 m., D. 0.15-0.20 m.

This grave had been disturbed and its covering slabs and all its original contents had been removed. Nothing was found in it and so presumably it had been found and cleared either in Hellenistic times or more probably by Tsountas.

- V. Grave, rock-cut, irregular. L. 0.95 m., W. 0.40 m., D. 0.15-0.20 m. (Pl. 19 (a).)

Although no covering slabs were found over it, the grave was undisturbed. In it there lay, in the contracted attitude on its left side with the head to the west, the skeleton of a child, perhaps about ten years old. In front of the lower part of the body just above the knees lay a vase (no. 1).

<sup>34</sup> Good examples in Blegen, *Korakou*, figs. 66 (right) and 79 (right).

<sup>35</sup> Schliemann, *Mycenae*, 109, fig. 164.

<sup>36</sup> *AM* 1886, 440, no. 5.

<sup>37</sup> Lolling, *Kuppelgrab bei Menidi*, pl. IV, 14.

<sup>38</sup> *BCH* 1878, pl. XV, 6.

<sup>39</sup> Schliemann, *Mycenae*, 109, fig. 163.

## FINDS

*Pottery*

- 3973  
(244) 1. Cup, hand made, with a single high swung loop handle. H. with handle 0.11 m., without handle 0.085 m., Di. 0.09 m., Di. of rim 0.085 m., Di. of base 0.04 m. (Pl. 20, 2.)

The clay is coarse and grey-brown in colour and the vase is unslipped. M.H. There are similar vases from Asine.<sup>40</sup>

- VI. Grave, rock-cut, irregular. L. 1.70 m., W. 0.035 m., D. 0.20 m.

There were no covering slabs and the grave had been disturbed and robbed of its original contents. In the earth in it there were no human bones and only a few L.H. III and Hellenistic sherds of no importance. Probably the tomb was found and cleared when Wall A, which is built along its south side, was constructed in L.H. III times.

- VII. Grave, rock-cut, irregular. L. 0.70 m., W. 0.35-0.46 m., D., 0.35 m.

This was a very small grave dug in the soft red rock, and was covered with one rather small rough stone. It contained the skeleton of a young child (about six years old) buried in the contracted attitude, lying on its left side with the head to the north. There were no vases, beads or other funeral offerings nor any sherds in the grave.

Close to this grave and under the wall (Wall B in Fig. 2) immediately to the east of it we found the greater part of a Yellow Minyan bowl (Pl. 20, 5). This may once have stood above the grave according to the practice noted by Blegen<sup>41</sup> at the Argive Heraeum.

- VIII. Grave, rock-cut, irregular. L. 0.80 m., W. 0.45 m., D. 0.40-0.45 m.

This grave lies between Graves III and V (see Pl. 19 (a)). It had one covering slab (0.70 × 0.30 m.) with a smaller stone above the southwest corner of the grave. There was a rough ledge round the edge for the adjustment of the covering slab. On the north side it is 0.06-0.10 m. wide and 0.15-0.20 m. deep. At the east end it is about 0.06-0.10 m. wide and about 0.25 m. or even more deep, since the rock here between it and Grave V is broken away. On the south and west, where the rock slopes down, a true ledge is not now discernible.

In the grave lay the skeleton of a young child in the contracted

<sup>40</sup> Frödin-Perman, *Asine*, 283, fig. 194, 2-4.

<sup>41</sup> Blegen, *Pyrgos*, 37 f.

attitude with the head to the west. The bones were very much decayed and it was not possible to determine on which side the skeleton had lain. Probably the child was not more than three years old. Round the neck was a necklace of gold and amber beads (nos. 2, 3) and below the body lay the fragments of the broken Ephyraean goblet (no. 1). The grave is thus certainly of L.H. II date.

### FINDS

#### A. Pottery

1. Goblet, fragmentary in three pieces and incomplete. H. of largest piece 0.13 m. The clay is pinkish buff in colour and the biscuit has a well polished slip of a buff tone. The paint is red. These undoubtedly come from an Ephyraean goblet similar to those from Korakou and elsewhere.<sup>42</sup> On two of the fragments part of the rim is preserved, and they show part of the conventionalised argonaut design with which the goblet was decorated. The third piece is from the lower part of the body on the same side as the smaller fragment and has also part of the design on it. L.H. II. (Pl. 23, 9-11.)

#### B. Miscellaneous Objects

2. Beads, gold, ten. Di. 0.003 m., H. 0.005 m. The beads are hollow and made of two convex pieces of gold soldered together. This is easily observed because one bead has come apart. The beads are pierced for threading through the centre of each convex piece. They are spherical and have vertical grooves.
3. Beads, amber, seven. These are so much decayed that their shapes and sizes cannot be determined with any certainty. All of them were pierced for threading.

### IX. Grave, rock-cut, regular. L. 1.00 m., W. 0.75 m., D. 0.50-0.60 m.

The grave had been disturbed and its contents removed and there were no covering slabs. When the disturbance took place is uncertain, possibly in Hellenistic times, because the grave was largely filled with stones and late tiles. In the earth was a carnelian bead (no. 1) which may perhaps be the sole survivor of its original contents. The only sherd worth mention is a fragment from a dark grey Minyan goblet (Pl. 23, 12).

### FINDS

#### Miscellaneous Objects

1. Bead, carnelian. Di. 0.004 m., H. 0.004 m. The bead is of a plain spherical shape and of good red carnelian, possibly Egyptian in origin.

### X. Grave, rock-cut, irregular. L. 0.85 m., W. 0.45 m., D. at E. end 0.50 m., at W. end 0.15 m.

There were no covering slabs and the upper part of the grave

<sup>42</sup> Blegen, *Korakou*, pl. VI. 1 and fig. 76; *Prosymna*, fig. 676, no. 425.

had been disturbed when the north-south Mycenaean wall was built to its west. (There is now a gap in this wall between the T-piece and the long piece to the south.) In the upper earth at the east end and under a heap of stones lay the fragments of two vases (nos. 1, 2). These, which were incomplete, may have belonged to the original contents of the grave and have been placed above or perhaps by the side of the body. In the grave lay the skeleton of a child lying in the contracted attitude on its right side with the head to the east. With it was a paste bead (no. 3). It would appear that the grave was disturbed when the L.H. III occupation of the area began, and the stones at the east end were perhaps thrown in to level the ground.

### FINDS

#### A. Pottery

1. Alabastron, fragmentary and incomplete, six pieces which may perhaps belong to more than one vase. L. of largest piece 0.16 m., W. 0.14 m., Di. not ascertainable.

The clay is pink and covered with a smooth buff slip. The paint is a thick rich black. On the side is a wave pattern rising to a high crest between the handles. A line of dots follows the edge of the wave and there are two lines of dots below the neck and rim which are painted in solid colour. A narrow band surrounds the base, which bears the wheel pattern. These are undoubtedly pieces of an alabastron of typical L.H. II style and fabric similar to examples from the Kalkani Cemetery<sup>43</sup> and elsewhere.<sup>44</sup> L.H. II. (Pl. 22 (a), excluding sherd at top right.)

2. Goblet, fragmentary, one piece. L. 0.15 m., W. 0.06 m. The pink biscuit is covered with a buff slip well smoothed, and the paint is a brown-black. This is part of the body and one handle of a goblet similar in shape to Grave III, no. 4 (Pl. 21 (a), ?), with either one or two high-swung handles. The whole vase, body and handle both, was decorated with the stipple pattern and the handle also has broad oblique bars. For the shape and style vases from the Kalkani and Argive Heraeum cemeteries may be compared.<sup>45</sup> L.H. II. (Pl. 22 (a), top right.)

#### B. Miscellaneous Objects

3. Bead, paste, blue. L. 0.006 m., Th. 0.003 m. This is of a plain oval form and pierced lengthwise.

### XI. Grave, cist. L. 0.56 m., W. 0.44 m., D. 0.32 m. (Pl. 19 (b).)

There were no covering slabs; they were probably removed when the L.H. III drain (C on plan) was cut along the north side of the grave and the L.H. III hard clay floor laid above. At each end, north and south, was one single vertical slab; and each side, east and west, consisted of one large and one small slab. In it were

<sup>43</sup> Wace, *Ch. Tombs*, pl. XXVII, tomb 515, no. 2. Cf. other ex. in this pl. and pl. XLIII.

<sup>44</sup> Blegen, *Prosymna*, fig. 687, for example.

<sup>45</sup> Shape: Wace, *Ch. Tombs*, pl. XXXIV, 16, 17. Decoration: *ibid.* pl. I, 40; Blegen, *Prosymna*, fig. 689.

found the crushed skull and the much decayed bones of the skeleton of a young child not more than five or six years old. The head was at the north end and the bones were rather scattered. No funeral offerings were found in the grave, but there were a few sherds of M.H. date and part of an obsidian blade. This is a characteristic M.H. grave.<sup>46</sup>

- XII. Grave, rock-cut, irregular. L. 1.60 m., W. 0.40-0.55 m., D. 0.45 m.

There were no covering slabs. The grave had been disturbed and its original contents removed. In the earth were a few M.H. sherds including one of Mattpainted Ware Group B III.

- XIII. Grace, cist. L.c. 0.45 m., W. 0.25 m., D. 0.30 (Pl. 19 (b).)

This grave had been disturbed. The covering slabs were missing, and all the slabs at the sides and ends except that at the north end had been removed. In it lay the remains of a young child buried in the contracted attitude with the head to the south and lying on the right side. In the earth were a few M.H. sherds and some chips of obsidian. There were no funerary offerings proper. The grave which is of a characteristic Middle Helladic type<sup>47</sup> was probably disturbed when the L.H. III clay floor was laid above it.

- XIV. Grave, rock-cut, irregular. L. 1.00-0.92 m., W. 0.50 m., D. 0.40-0.70 m. (Pl. 19 (b).)

The grave had been partly disturbed and the covering slabs were missing. In it the skeleton of a child of about ten or twelve years of age lay on its back in the contracted attitude with its head to the north. The bones were all much decayed. In the earth were several M.H. sherds (Pl. 23), notably Grey Minyan (nos. 1-3) and Mattpainted Ware (nos. 4-8). Some of the latter were, rather, Yellow Minyan sherds painted with matt paint.

- XV. Grave, rock-cut, irregular. L. 0.80 m., W. 0.40-0.45 m., D. 0.35-0.40 m. (Pl. 19 (b).)

The covering slabs were missing and the grave was probably disturbed when the L.H. III drain (C on plan) was built above it. The bones were much decayed and broken and no definite attitude of the skeleton (or skeletons) could be observed. There were fragments of a skull at each end, north and south. If there were two bodies, which is not by any means certain, then apparently one had its head to the north and the other its head to the south.

<sup>46</sup> *Symbolae Osloenses* IX, 31.

<sup>47</sup> *Symbolae Osloenses* IX, 31.

In any case to judge by this and the decayed condition of the bones, the skeleton (or skeletons) was that of a young child. In the earth was found a fragment of a Matt-painted M.H. panelled cup, Group B II (Pl. 23, 13),<sup>49</sup> and one Argive Minyan sherd (Pl. 23, 12).

The first point to be noticed about these fifteen graves is that they are arranged in groups, perhaps family groups. There is one group consisting of nos. I, II, IV, another of nos. III, V, VIII, IX, XII and a third group of nos. XI, XIII, XIV, XV. This grouping of the graves can be compared with that of the graves within the Cyclopean walls, where there is the group of the Shaft Graves themselves, the group of graves in the eastern part of the Grave Circle found by Stamatakis, and the group of graves underneath the Ramp House (see above p. 206, A, C, E and Fig. 1).

The second point is that the graves outside the walls, like those within, range in date from Middle Helladic to Late Helladic II. In other words in both sections of the Prehistoric Cemetery there is no grave later than L.H. II and this simple fact, the absence of any L.H. III graves, confirms the conclusion already arrived at, that the Prehistoric Cemetery was disused in L.H. III when the Lion Gate, the Cyclopean walls, the Granary, and the Grave Circle itself and the houses south of it were constructed.<sup>50</sup>

Of the graves outside the walls, the cist graves nos. XI and XIII are certainly Middle Helladic in date, since they conform to a well known type of M.H. grave.<sup>51</sup> Nos. II and V are, to judge by their contents, also Middle Helladic in date. Close to Grave VII and just under the broken wall immediately to the east of it most of a Yellow Minyan bowl was found, which may once have stood above the grave, according to the practice noted by Blegen at the Argive Heracum.<sup>52</sup> This grave then may probably be classed also as Middle Helladic. Grave III dates from the end of L.H. I or the beginning of L.H. II. To judge by the finds in them Graves VIII and X are almost certainly Late Helladic II.

Of the remaining graves nos. XIV and XV are probably Middle Helladic, and so too, most likely, are nos. I and IV. Of the group consisting of Graves III, V, VIII, IX, and XII, one—Grave V—is M.H., two more—Graves III and VIII—are L.H. I-II, and so the remaining two Graves IX and XII might tentatively be assigned to the same period.

The region between this latter group and Grave X, another L.H. II grave, was noticeable for the fact that close to the rock here were found the remains

<sup>49</sup> For the pattern cf. Blegen, *Korakou*, fig. 34, 14.

<sup>50</sup> See Wace, *Mycenae*, 61 f., 132 ff.

<sup>51</sup> *Symbolae Osloenses* IX, 31.

<sup>52</sup> Blegen, *Prosymna*, 37 f.

of several L.H. I vases, possibly from graves which were disturbed when the cemetery had fallen into disuse and (as we shall see) was built over.

One of these vases is nearly complete, the rest only fragmentary. The following are the chief pieces:

- 3929 1. Cup, tea-cup shape, with strap handle, of which only the base is preserved.  
(400) Missing parts include that part of the rim where the handle should join. H. 0.007 m., Di. of rim 0.125 m., of base 0.043 m.

Well made, with thin walls. Clay buff, with smooth buff slip inside and out. Carefully decorated in streaky black-brown paint with subsidiary dots superimposed in white. Foot painted in solid colour, with two broad parallel bands above; on body, large spirals with thick outer ring and solid centre, linked by double tangents and loops above and below; dots superimposed in white on centre of spirals and on the right-hand tangents; rim painted inside and out. (Pl. 25, 1.)

This is a very fine example of a characteristic L.H. I type — already familiar from Mycenae,<sup>54</sup> the Argive Heraeum,<sup>55</sup> and elsewhere. On some of these there are dots of superimposed white on the rim, and there may have been such on the present vase, as the rim is badly rubbed.

- (403) 2. Base of a cup or bowl, probably like the preceding one. (Pl. 22 (b), 8.)  
(404) 3. Two fragments of a low-stemmed kylix. Measurements of larger piece not available; smaller piece: H. 0.062 m., width 0.08 m., thickness 0.003 m. Clay pink with buff slip, smooth on outside. Decorated in red-brown paint with three wide parallel bands round lower part of bowl, with running spiral above. Rim painted inside and out. The decoration suggests a L.H. II date.<sup>56</sup> (Pl. 22 (b), 3-4.)

- (401) 4. Fragment of a jar (? piriform). Decorated with three broad stripes, and above them plant motifs with big cross-hatched leaves ('tennis-racket trees'), and between these, flower-buds. The general style of drawing is very similar to that of a group of early L.H. I piriform jars from Prosymna,<sup>57</sup> and the present fragment may be from a pot of the same shape, though larger. The flower-buds are like those on a cup from Prosymna, also of the earliest L.H. I style.<sup>58</sup> The cross-hatched leaves are common on slightly later pots.<sup>59</sup> (Pl. 22 (b), 1.)

5. Sherd with cross-hatched leaf pattern, perhaps from a squat jug or small alabastron.<sup>60</sup> L.H. I, but later than the preceding piece. (Pl. 22 (b), 5.)

- (402) 6. Base of a cup, probably of 'Vaphio' shape. L.H. I cups of that shape are sometimes decorated, as this fragment is, with a bold spiral underneath the base.<sup>61</sup> (Pl. 22 (b), 7.)

- (305) 7. Two pieces of a cup like Pl. 25, 1. (Pl. 22 (b), 6.) The other sherd illustrated with the above comes from the area just south of the same group of graves.

- (?530) 8. Small fragment with part of argonaut design and 'foliate band,' 'Palace Style,' L.H. II (early).<sup>62</sup> (Pl. 22 (b), 2.)

In the neighbourhood of the group of Graves XI, XIII, XIV, XV, many pieces of M.H. pottery were found, including an extremely interesting, though fragmentary, matt-painted cup shown in Pl. 25, 2. It belongs to a comparatively rare light-on-dark M.H. ware, perhaps best known from Korakou.<sup>63</sup>

<sup>54</sup> Discussed by Wace, *Ch. Tombs*, 148. Furumark's type 218 (fig. 13).

<sup>55</sup> Wace, *Ch. Tombs*, pl. I, tomb 529, no. 1; pl. XXXIV, tomb 517, no. 11; pl. XLI, tomb 518, no. 37.

<sup>56</sup> Blegen, *Prosymna*, fig. 660.

<sup>57</sup> Cf. *ibid.*, fig. 674 for decoration and shape; also fig. 683 for decoration.

<sup>58</sup> *Ibid.*, fig. 653. Cf. Mylonas, *Προσφωτ. 'Ελευσίς*, fig. 96 (right).

<sup>59</sup> *Ibid.*, fig. 652.

<sup>60</sup> E.g., *ibid.*, figs. 654, 656, 657.

<sup>61</sup> Cf. *ibid.*, fig. 654 (alabastron); Wace, *Ch. Tombs*, pl. XXXIII, 2 (squat jug).

<sup>62</sup> Cf. Wace, *Ch. Tombs*, pl. XLI, tomb 518, no. 35; and for another shape with spiral underneath base, pl. XXXIII, tomb 517, no. 12.

<sup>63</sup> Cf. Furumark, *Myc. Pottery*, fig. 50, motif no. 22, 2, and examples cited there.

<sup>64</sup> Blegen, *Korakou*, 32 f., Class D I, with fig. 47 and pl. II 2, 4, 6, 8.



Unlike the Korakou pieces, however, this cup is decorated in two colours, red and white, on a dark-painted ground. The other sherds include pieces of ordinary polychrome Matt-painted Ware (Pl. 24 (a), 6), decorated with a bold pattern in dull red outlined in brown. The ground is a light brown slip. This ware, Blegen's Class B III, is represented at Korakou<sup>43</sup> and Zygouries,<sup>44</sup> and by some especially fine pots from the Argive Heraeum.<sup>45</sup> There are sherds of it in the Nauplia Museum from earlier excavations at Mycenae (Pl. 24 (a), 1-5).

Thus we see that the pottery round this last group and that round Grave X and between it and the group to which Grave III belongs all confirm the dating already suggested for these graves.

As already remarked the part of the cemetery within the walls, the Grave Circle and the graves adjoining it to the north and south, ranges in date from Middle Helladic to Late Helladic II (the date of the shaft grave below the Granary), and the same, we see, holds good for the fifteen graves now discovered outside the walls. Within the walls there are shaft graves and shallow rock-cut graves of a M.H. type and outside the walls we have discovered one shaft grave, several shallow rock-cut graves, and two M.H. cist graves. Thus the same types of grave occur in both parts of the cemetery. Further the plan (FIG. 1) shows that the distance horizontally from the shaft grave below the Granary (D on plan) to Grave VI and to the group formed by Graves XI, XIII, XIV and XV is not great. In fact that distance is much less than the distance between the shaft grave below the Granary (D) and the M.H. grave below the east room of the South House (F on plan). There is indeed, on consideration of all the circumstances, no reasonable doubt but that the graves within the walls and those now discovered outside the walls are part of the same cemetery. When we can resume our excavations and explore the region south of Grave VI and east of Grave XIII there is every likelihood that more graves will be found. In fact the further exploration of the Prehistoric Cemetery, of which the Royal Shaft Graves formed part, is one of the more urgent pieces of work to be done at Mycenae.

Pausanias<sup>46</sup> in his account of Mycenae implies that the tombs of Agamemnon and his companions lay within the Cyclopean walls, and states that Clytaemnestra and Aegisthus were buried a little outside the walls because they were considered unworthy of burial within the city. These remarks of Pausanias most probably represent the local tradition told to him on his visit to the site. Schliemann proved the correctness of this view as regards the first part of the tradition, that relating to the graves of Agamemnon and his companions, by his discovery of the Grave Circle with the Royal Shaft Graves just within the Lion Gate. Although we know that the Shaft Graves are not

<sup>43</sup> *Op. cit.*, 28 and fig. 40.  
<sup>44</sup> *Id.*, Zygouries, 134 and fig. 127.

<sup>45</sup> *Id.*, *Prosymna*, 386 f., and pl. IV.

<sup>46</sup> II, 16, 3.

those of Agamemnon and his companions, yet local tradition had preserved the knowledge that royal graves lay within the walls. Now that we know that the line of the fourteenth century Cyclopean walls was carried through the middle of the Prehistoric Cemetery, we might perhaps consider that the second part of Pausanias' statement (the part relating to the graves of Clytemnestra and Aegisthus)<sup>67</sup> indicates that local tradition in the second century A.D. also preserved some knowledge of early prehistoric graves *outside* the walls. At any rate our discovery of these fifteen graves outside the walls near the Lion Gate proves that tradition was not wrong in believing in the existence of prehistoric graves in this area. Perhaps when the excavations of this part of the Prehistoric Cemetery outside the walls can be resumed we may hope to find the graves which local tradition took for those of Clytemnestra and Aegisthus.

The excavations of 1920-23 within the Cyclopean walls showed that the Prehistoric Cemetery there was disused after the end of the Late Helladic II period, for no later graves were found in it, a conclusion which as noted above is fully confirmed by the excavations of 1939 in the part of the Prehistoric Cemetery outside the walls. The excavations of 1920-23 also showed that this disuse of the cemetery was a natural result of the enlargement and refortification of the citadel comparatively early in L.H. III. The Cyclopean wall follows the natural line of defence on the west side of the citadel, except for the bulge outwards to include the Grave Circle and the Royal Shaft Graves, and runs in a northerly direction towards the Lion Gate, which stands at the easiest and most obvious point of access to the citadel and the palace on its summit. It thus cuts the Prehistoric Cemetery in two. After the Royal Shaft Graves had been enclosed by the Grave Circle and made a sacred area the remaining portion of the cemetery within the walls was given over to building purposes. To the south of the Grave Circle were built the Ramp House, the House of the Warrior Vase, and the South House, and to the north of it, by the side of the Lion Gate, the Granary was erected. That all this construction took place after the beginning of the L.H. III period in the fourteenth century is clear from the results of the excavations of 1920-23.<sup>68</sup>

The part of the Prehistoric Cemetery outside the walls, west of the Lion Gate, was also employed for other purposes when it fell into disuse early in L.H. III. As the enlargement of the enceinte made the Lion Gate the principal entrance it is clear that an area so close to the Lion Gate would be valuable and useful to those not allowed to live within the walls. One can

<sup>67</sup> It must be remembered that the two tholos tombs called to-day the Tomb of Clytemnestra and the Tomb of Aegisthus have no connection with the Prehistoric Cemetery or with the tradition recorded by Pausanias,

for these names are quite modern and are merely archaeological conveniences.

<sup>68</sup> For the chronology see Wace, *Mycenae*, 62 f., 132 ff.

imagine that outside the Lion Gate there would inevitably spring up buildings to serve the needs of travellers and traders and also perhaps to supply to some extent the needs of those who dwelt in the citadel. There would have been inns to supply refreshments and lodging for man and beast, and shops or booths to supply provisions and goods to travellers and also to the inhabitants and garrison of Mycenae itself. Further, part of the civilian population, especially of the working or artisan class not allowed within the walls, may well have lived here in small houses close to the protection of the citadel.

One of the results of the excavations of 1939 was to make it clear that outside the citadel of Mycenae the civilian population lived in separate settlements in convenient places on the hill ridges, each apparently with its own cemetery. These settlements may have been grouped on some tribal system, as suggested by Tsountas for the cemeteries of chamber tombs near which they occur. There is on the hill above the Treasury of Atreus a settlement of large important houses, and below them in the slopes of the ridge, especially on the west side, are some of the largest and richest chamber tombs found at Mycenae. The Kalkani cemetery belonged without doubt to the settlement on the summit of that hill. Further exploration will almost certainly show (for surface indications already suggest it) that the other main groups of chamber tombs are related to settlements or groups of houses adjoining. That part of the civilian population of Mycenae should have lived immediately outside the Lion Gate need thus cause no astonishment. That it should be a trading and working-class district would also be natural since the inhabitants of such a district would find it more convenient to live near the citadel, the centre of the government, and the princes, nobles, and officials within the walls.

Whether this interpretation of the ruined buildings found above the Prehistoric Cemetery west of the Lion Gate is correct or not the fact remains that the buildings themselves are not earlier in date than L.H. III and this is proved by the pottery and other remains found in connection with them.

On the western slope of the hill runs a terrace wall of Cyclopean construction shown by Steffen and marked M on the plans Figs. 1 and 3. This wall agrees remarkably well in style with the Cyclopean walls of the citadel itself and on that ground alone could be assigned to the same date, L.H. III. When the face of the wall was cleared nothing but L.H. III pottery was found (including considerable fragments of a L.H. III krater, Pl. 24 (b)), and in trials made beneath the lowest course of the wall, where there is a layer of earth 0.076 m. thick between it and the bedrock, L.H. III pottery predominated, though a little M.H. and L.H. I and II ware was also present. It is thus obvious that the wall cannot have been built before L.H. III. As the hillside slopes down westwards it is natural that it should have been adapted

for habitation by terracing, as usual on Mycenaean sites. Above this wall to the east are signs of further terracing along the edge of the rock, where a cut was made through the dump thrown out in Schliemann's excavations.

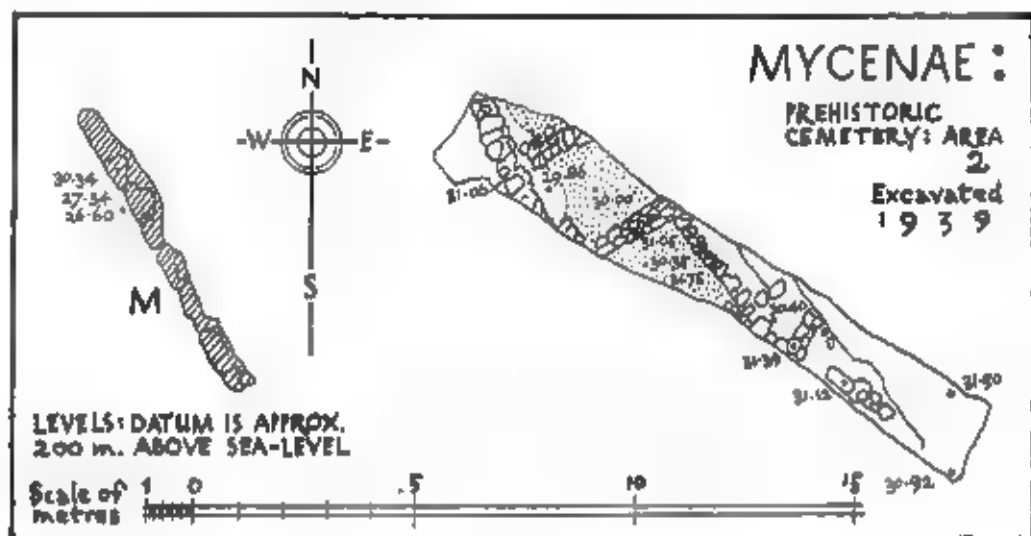


FIG. 3.

This trench (see plan of 'Area 2,' FIG. 3), about 15.00 m. long and 2.00 m. wide, was dug through the lower part, the tail, of Schliemann's dump which still covers the ground in this area to a depth varying from half a metre to a metre and a half. Below it appears the black soil which formed the surface humus previous to Schliemann's excavations. As might be expected the pottery from the soil of the dump was of a mixed character and of all periods from M.H. to Hellenistic. The more interesting sherds, one from a L.H. III B bowl with a representation of warriors, and two L.H. III fragments with signs of the Minoan-Mycenaean script, have already been illustrated elsewhere.<sup>89</sup>

Below the original surface level the trench was carried down to the rock, which was found at levels varying from 31.50 to 29.86, in the hope that traces of tombs might be found. The bedrock is the same soft friable rock of which the whole of this side of the citadel hill<sup>90</sup> consists from the Lion Gate westwards, and it slopes generally from east to west. On the rock, which is in places cut away, especially on the west where it forms a sort of edge, stands a complex of walls roughly built of limestone blocks, mostly unworked and of no great size. The levels on the plan indicate the height of the walls and the varying depths at which the rock surface was found. In the middle of the trench a cement floor is laid on the rock.

<sup>89</sup> Wace, *Mycenae*, fig. 71 c, 1-3.

<sup>90</sup> Wace, *op. cit.*, 52.

It will be seen from the plan and the levels that the walls were low, probably the footings of walls of crude brick. The depth of soil above the rock was on the average about 1.50 m. except on the west where it was deeper owing to the slope and the cutting away of the rock. There is no definite evidence for dating the walls or the cement floor which is associated with them, but the upper walls and the floor seem to be almost certainly Hellenistic. Some of the lower parts founded on the rock may be prehistoric, L.H. III, and the possibility that some pieces may be of classical date must not be excluded, although unlikely. In view of the discovery of the prehistoric graves to the north, in Area 1, it was decided that it was not worth while to open out this trench or to try to trace the walls further. The pottery was very mixed all the way down to the rock and no clear stratification could be observed. There was much Hellenistic ware including tiles, fragments of lamps, Megarian bowls, and 'tear bottles'; a few sherds of Geometric, Orientalising and Attic black glazed ware; and much Mycenaean, mostly L.H. III, and some M.H. ware. No further details about it can now be given, for the pottery was among the material which was lost or destroyed when the old museum at Nauplia was used as an air-raid shelter during the war.

Among the walls about the middle of the trench a few silver coins were found, including specimens from Aegina, Sicyon, Boeotia, Argos, and Phocis. The coins were deposited in the Nauplia Museum where they await study. None appeared to be older than the fourth century and they thus probably belong to the Hellenistic period of Mycenae when it was reoccupied as a *kome* of Argos, from the third century onwards.<sup>21</sup>

The section of the Prehistoric Cemetery ('Area 1') containing the groups of Graves XI, XIII, XIV, XV and III, V, VIII, IX and XII is marked by the presence of a stout Mycenaean wall which runs along the slope of the rock where it makes a noticeable dip southwestwards (see FIG. 2).

From this main wall other walls run off at right angles in an easterly or northeasterly direction (one of them reaches to Grave IV) and in connection with them were the remains of a floor of hard yellowish-white clay 0.08 m. thick. Underneath the floor just north of Grave XI and over Grave XV runs a well-built drain (C), which descends the slope from the east and runs through the outer wall with a sharp turn to the southwest. This turn was probably designed to lessen the force of the fall of the water at the point of its exit through the thick wall. The fragmentary state of these Mycenaean walls and of the floor does not enable any definite conclusion to be drawn as to the object or purpose of the buildings to which they belonged. The date of the buildings is clear. On the rock everywhere in this region Middle Helladic

<sup>21</sup> BSA XXV, 422 f.

and Late Helladic pottery was common. No Early Helladic pottery was noted. The Middle Helladic pottery was specially noticeable round the group of Graves XI, XIII, XIV, XV, and most of a Yellow Minyan bowl was found under the wall east of Grave VII. The earliest possible date for the walls then is Middle Helladic, but since L.H. III pottery was found below and in the hard clay floor, which is in definite relation to the walls, it is obvious that the walls and floor cannot be earlier than L.H. III. This conclusion was confirmed by the discovery of a group of L.H. III vases above the floor level just to the south of Grave XIII. These are as follows:

- 3965 A. Amphora, piriform, three horizontal loop handles on shoulder. ■. 0.148 m.,  
(Inv. Di. 0.115 m., Di. of rim 0.10 m., Di. of base 0.057 m.  
245) The biscuit is pink and covered with a smooth light buff slip. The paint shades from red to red-brown. The foot is painted in solid colour. Round the body are three groups of bands and lines. On the shoulder at a level with the handles are twenty-nine vertical wavy lines. There are five lines round the neck. The handles are painted and the rim is painted inside and out. L.H. III A-B. (Pl. 25, 3.)  
The shape of this jar (Furumark's type 48) differs from the common L.H. III piriform jar in having a deeper, splayed neck, without the usual 'metallic' rim. Examples are known from Zygouries<sup>72</sup> and Tiryns,<sup>73</sup> the latter being closely similar in decoration.
- 3958 B. Amphora, fragmentary, of same type and shape as A; but only one handle, the  
(247) neck, and part of the body are preserved. H. of neck 0.09 m., Di. of neck 0.105 m.  
The biscuit is pink and covered with smooth light buff slip. The vase is unpainted. L.H. III.
- 3957 C. Stirrup-jar(?), upper part missing. H. 0.14 m., Di. of base 0.062 m.  
(246) The biscuit is pink with a pinkish buff slip on the outside. The paint is red. Round the body are lines and bands. Round the shoulder are groups of reversed sigmas between plain bands. L.H. III.
- D. Bowl, deep, fragments only. Description not available.  
The biscuit is pink with a buff slip. On the body is a chevron pattern in red paint.
- 3967 E. Jar, fragmentary, lower part only. H. 0.145 m., Di. of base 0.085 m., greatest  
(529) Di. 0.24 m.  
The biscuit is orange buff, and the surface has a slip of the same colour. The vase is unpainted. L.H. III.

In connection with and near the drain various L.H. III vases, all fragmentary, were found. The most important of these were the following:

- A, B, C. Three bowls, handleless. Detailed descriptions are not now available, but compare G, H, I, below. These three were found on bedrock, 0.64 m. from Grave XI and 0.35 m. from the inner face of the drain.
- 3922 D. Kylix, part of bowl and vertical ribbon-handle only. H. 0.07 m., Di. (estimated)  
(531) 0.11 m.  
The biscuit is pink and is covered with a light buff slip. The bowl has an angular profile and the handle is thick. The vase was unpainted. L.H. III.  
This type of kylix (Furumark's 267)<sup>74</sup> is very common at Mycenae throughout L.H. III.

<sup>72</sup> Blegen, *Zygouries*, fig. 168, no. 329.

<sup>73</sup> Schliemann, *Tiryns*, no. 49.

<sup>74</sup> *Mycenaean Pottery*, figs. 16-17.

- 3945 (532) E. Kylix, base and half of bowl only. H. 0.15 m., Di. of base 0.07 m.  
The biscuit is pink and there is a smooth buff slip. Undecorated. L.H. III.  
D and E were found inside the drain.
- ?3952 F. Kylix (or bowl?), fragmentary.  
The biscuit is pink and the vase is covered with red glaze paint. L.H. III.  
This was found 0.10 m. below the hard clay floor and 0.35 m. from the south wall of the drain.
- 3941 (526) G. Bowl, conical, part of rim restored. H. 0.044 m., Di. of rim 0.09 m., Di. of base 0.035 m.  
The clay is dark buff and the vase is unslipped and unpainted. L.H. III.
- 3940 (527) H. Bowl, conical, part of rim-restored. H. 0.045 m., Di. of rim 0.10 m., Di. of base 0.04 m.  
The clay is dark buff shading to orange, and unslipped and unpainted. L.H. III.
- 3938 (528) I. Bowl, conical, part of rim restored, poor condition. H. 0.051 m., Di. of rim 0.09 m., Di. of base 0.04 m.  
The clay is brown and is unslipped and unpainted. L.H. III.  
Such plain bowls (Furumark's type 204)<sup>75</sup> are common throughout L.H. III A and B. These three were found together near the drain, and G and I were inside H.

This evidence alone is enough to show that the drain and the complex of walls connected with it cannot date earlier than L.H. III, and this conclusion is reinforced by a consideration of the rest of the finds from the neighbourhood, which, besides pottery, include terracotta figurines, a flint arrowhead, whorls or buttons, raw amethyst, a bronze spearhead, etc.<sup>76</sup>

This complex of L.H. III walls includes, of course, the T-shaped fragment north of Grave X, which is separated from the rest because the main Mycenaean (L.H. III) wall has been destroyed in the space between Graves VIII and X. The walls which make a small rectangular enclosure round Grave VII, the wall running east from Grave III towards Grave IV, and the wall running along the south side of Grave VI, all also seem to form part of these Mycenaean (L.H. III) buildings, for they not only agree in their orientations, but also are connected with the hard clay floor which lies immediately south of the wall by Grave VI and of the short piece of wall directly to the east of Grave VII. The cross wall directly to the northeast of Grave II may well also be Mycenaean (L.H. III). Its upper end rests on the rock, but the northern end rests on debris in which L.H. III sherds are found. Northeast of the wall, moreover, there is (adjacent to spot-level 33.92 on the plan) a piece of a hard clay floor similar to that already noticed in connection with the walls by Graves VI, VII, XI and XIII-XV. The wall angle formed by two unconnected pieces of wall directly northeast of the T-wall rests on the rock and is therefore at the right level for a Mycenaean building; it is, however, at a totally different angle from the walls which are certainly of L.H. III date. It might perhaps be of M.H. date, but there is no

<sup>75</sup> *Op. cit.*, fig. 15. <sup>76</sup> Detailed descriptions of these are unfortunately not now available. See introduction.

other M.H. building in this area. For the present, therefore, it is probably best to consider it as the remains of an early L.H. III building which was destroyed when the main complex just described was erected.

These Mycenaean buildings were presumably ruined towards the end of the L.H. III B period—before the final destruction of Mycenae—for no L.H. III C pottery seems to have been found in them. It would be quite natural that buildings outside the walls might be destroyed some time before the final catastrophe to the citadel itself. Detailed study of the walls and of finds around them might perhaps lead to more definite conclusions. Unfortunately the pottery found here was among that which was lost when the basement of the Nauplia Museum became an air-raid shelter during the war. It is thus impossible to check the point now, and fresh investigation on the site will be necessary.

There seems to be no definite trace of any occupation of this area by buildings of any kind during the classical period. A few finds belonging to that period came to light, but they were not in definite association with any building or other ruins. The most important of these finds are as follows:

- (i) Part of an archaic painted tile with part of a human face.
- (ii) Part of relief band from a moulded pithos showing a winged female figure.
- 3942 (iii) Fragments of at least two archaic terracotta figurines.

All the other walls in this area are apparently Hellenistic and belong to the period when the whole of this slope was included within the wall of the lower town, which did not exist as such before Hellenistic times.<sup>77</sup> These Hellenistic walls form the present boundary of the excavated area all along the east side. They overlie the Mycenaean walls and floor by the group of Graves XI, XIII–XV, south and east of Grave VI, and northeast of Grave I. These Hellenistic walls are not necessarily all of the same period and do not therefore necessarily all belong to one building; but till the excavations can be completed any expression of opinion about their date and purpose would be premature. In some places, for instance east and south of Grave VI, they rest on the rock; at other points, for instance where they overlie the Mycenaean wall northeast of Grave I, they rest on earlier debris and seem to be differently constructed. Also the cross wall south of the group of Graves XI, XIII–XV goes down exceptionally deep and is much better built of large shaped blocks of limestone. This construction is perhaps due to the fact that it stands at a place where the rock slopes down rather sharply to the west. Since the north face of this wall, in contrast to its south face, looks rough, as if it had never been exposed but built up against a fill or the natural rock, it is possible that the deep area to the south might have been a basement.

<sup>77</sup> *BSA* XXV, 416 ff.



There is one wall, which from its level is presumably Hellenistic, which does not seem to fit in with the other walls of the period. This is the oblique wall in the northern section of the area. The level of this wall is too high for it to be Mycenaean although there is a piece of a floor of beaten earth or clay on its north side. It rests on earlier debris and therefore till this can be analysed we can provisionally call it Hellenistic and perhaps attribute it to a slightly earlier period than the other Hellenistic walls already mentioned. In connection with these Hellenistic walls there was found, besides many tiles and some other miscellaneous objects, a certain amount of pottery, including pieces of Megarian bowls (one inscribed, but no details now available) and fragments of three fusiform unguentaria or 'tear-bottles' (Nauplia Mus. 3936).

A. J. B. WACE

## HOMERIC ART<sup>1</sup>

### *Homeric Scenes in Greek Art: Works of Art in Homer.*

The phrase 'Homeric Art' is ambiguous. It may mean *either* the poet's description of works of art familiar to himself and his audience, or transmitted to them as the furniture of the legends; *or* the poet's own style of presentation, in relation to other modes of craftsmanship in his time. There is also the reproduction, by painting or otherwise, of episodes from the poems, and as these may be contemporary as well as later, the study of them merges in that of Homeric representations, either of scenes of combat, or of the wild life which inspired so many of the similes.

It will clear the ground to consider this last topic first. On Attic vases, Homeric scenes are frequent, and often identified by the names of heroes. The story of Achilles and Troilus occurs on a Middle Corinthian vase by Timondas;<sup>2</sup> that of Theseus and Ariadne, with this and other heroic subjects, on the François vase;<sup>3</sup> the Judgment of Paris on the Chigi vase;<sup>4</sup> Odysseus and the Cyclops' Ram on a fragmentary jug from Aegina;<sup>5</sup> Pelcus and Thetis on a Cretan plate;<sup>6</sup> Bellerophon and the Chimaera on a Protocorinthian vase;<sup>7</sup> Euphorbus, Menelaus, and Hector, with their names, on a plate from Kamiros;<sup>8</sup> Paris shooting Achilles on a vase from Perachora; Achilles and Penthesilea on the shield from Tiryns;<sup>9</sup> Odysseus and the Cyclops on the Aristonophos vase;<sup>10</sup> Theseus and Ariadne, even earlier, on a geometric bowl from Attica<sup>11</sup> of the eighth century and on an ivory plaque from Sparta;<sup>12</sup> the same episode—a man embarking a woman on his ship—occurs on one of the finest Minoan signet-rings from Crete.<sup>13</sup>

In these representations there is no attempt to archaize: armour and other accessories are of the period to which the vase or signet is assigned by its technique. All we can infer is that *at that period* the story was current in the form in which it is depicted. It may have been a novelty then, or of venerable antiquity. It may have been borrowed by the artist from the poem, or—less probably—by the poet from the potter. This kind of

<sup>1</sup> I desire to acknowledge with thanks the help of Miss Dorothy Gray, of St. Hugh's College, Oxford, with references and some points of detail in the text.

Apart from the usual abbreviations used in *BSA*, the following special abbreviations have been used: Buschor = *Griechische Vasen* (1940); Bossert = Bossert, *The Art of Ancient Greece*; here numbers refer to figures.

<sup>2</sup> Payne, *Necrocorinthia*, pl. 34, 5.

<sup>3</sup> FR, pl. 13.

<sup>4</sup> *CVA Italia I*, pl. 4.

<sup>5</sup> Buschor, *Griechische Vasenmalerei* (1925), 44, fig. 28.

<sup>6</sup> Buschor, 49, fig. 57.

<sup>7</sup> Buschor, 28, fig. 33.

<sup>8</sup> Buschor, 53, fig. 62.

<sup>9</sup> *BSA* XLII, pl. 18A.

<sup>10</sup> *MuZ*, nos. 64-5.

<sup>11</sup> Buschor, 18, fig. 18.

<sup>12</sup> *Artemis Orthia*, pls. CIX-CX.

<sup>13</sup> Bossert, 400 c.

'Homeric Art' only comes into the present context, because until living memory such representations were the only 'illustrations' of Homeric material culture, and it was in terms of these works of art that the Homeric descriptions were interpreted, as in Chantrey's reconstruction of the Shield of Achilles.

*Retrospect of Interpretations : Minoan, Homeric, Hellenic.*

Thus the problem of Homeric art is twofold: the archaeological recognition of works of art described in the poems, and the poet's own method of presenting descriptions of scenes and activities, compared with those of artists in other materials, at various periods.

In both aspects alike, a new phase of criticism began with the discovery—mainly due to Schliemann and other archaeologists—that there had been a whole cycle of artistic achievement in Greek lands before the Hellenic, separated from it by several centuries relatively barbarous, but also relatively ill-represented archaeologically. Consequently there was now a choice between three main conclusions:

*A. Homer is Early Hellenic*—as was universally believed before Schliemann's time, artistic appreciation of beauty, in nature and in man's works, having existed 'all the time' in Hellenic souls, but 'release' having come earlier to the tongue than to the hand—if the traditional date for 'Homer' about 850 B.C. was accepted—so that imaginative literature, descriptive and narrative, preceded the creation of comparable works of material art.

*B. Homer is Late Minoan and Mycenaean*—or at least includes excerpts—perhaps (as Evans supposed) translated—from a literature as vividly realistic as the best Minoan art, originating among people who were creating and using realistically decorated objects such as the 'Lion Dagger' or the Vaphio Cups. Somehow this literature was transmitted from contemporaries of the 'Trojan War' and the historical Sea-Raids to Aeolic and Ionian Greeks of the seventh and following centuries.

*C. Homer belongs to the Dark Ages*, post-Minoan but pre-Hellenic, when the material arts in Greek lands were at a very low ebb, but—if the traditional date be accepted—poets occasionally saw, and celebrated, exotic works of art, Egyptian, Assyrian, or Phoenician, different from their own art, such as it was, and only faintly appreciated.

It has long been realized, however, that these three conclusions were not mutually exclusive. One of the first signs of disintegration, before the

close of the Minoan age, was the degeneration of decorative art, most clearly seen in the popular art of vase painting. Figure-subjects cease, and even floral ornaments are abbreviated till they are almost unrecognizable. Seal-stones become rare, and almost purely linear, like most of the painted ornament. There is already little to compare with any literary tradition, even if such a literature had been preserved.

Conversely, one of the first signs of recuperation is the reappearance of plants and animals in the panels of the 'tectonic' geometrical decoration, mainly based on woodwork and basketry. It is followed by the reappearance of human figures, at first almost as accessories to the animals—men feeding horses or attacking lions—but soon engaged in specifically human activities—fighting, driving chariots, sailing in ships, engaging in dances or funerals. It is in this (Protocorinthian) context that the first legendary subjects appear: Heracles shooting centaurs, fighting Geryon, killing a lion, Theseus and Ariadne (as above), and so forth. Scenes of combat are eventually identified by the names of heroes—Euphorbus, Menelaus, Hector. So few of these are as early as the traditional date for 'Homer,' that they may probably all be regarded as borrowed by the vase-painters from the poets. Rather later, their sudden and frequent appearance in Attica, in the sixth century, stands in close connexion with the reputed 'Peisistratid recension' of Ionian epic.

There is, however, one qualification, not easy to formulate, but essential to our argument. Masterpieces of gold- or bronze-work may well have been celebrated by singers almost contemporary with their makers; an example is Hesiod's *Shield of Heracles*, enhanced from memories of actual shields such as those in the Idaean Cave. Such descriptions may have passed, with descriptions of palaces or ships, into a common repertory of traditional poetry or saga. But palaces were looted, during wars and invasions, and tombs were violated, at all periods, accidentally. The evidence for this is partly archaeological, the later potsherds and other objects left by the tomb-robbers at Menidi and in some of the *tholoi* at Mycenae; partly traditional, like the 'treasury' built by Zetes and Calais for Amphiaraus, which had its entrance *at the top*, clearly a description of the displaced capstone of a *tholos*. The whole cycle of 'treasury' stories here falls into its place, at Orchomenus and Mycenae. Deliberately deposited antiques or heirlooms are very rare: *cf.* a Mycenaean ivory in the foundations of a Geometric building in Delos;<sup>14</sup> two Mycenaean III c vases in the Cypro-geometric Tomb 26 at Kourion.<sup>15</sup> There were also dedicated shields and other objects in the temples. 'Nestor's Cup' may have been long treasured at Pylos.

<sup>14</sup> *AJA* LI, 273.

<sup>15</sup> *AJA* XLI, 88; *Swedish Cypr. Exped.* IV, 2, 186.

The 'Sceptre of Agamemnon,' a spear-head seen by Pausanias,<sup>16</sup> was casually found, with gold objects, on the boundary between Chaeronea and Panoepus.<sup>17</sup> By such accidents works of art of any period might—and probably did—come back into use at any subsequent time, and in turn give rise to descriptions indistinguishable from the first category.

A parallel to such literary commemoration is the sealstone described by Evans,<sup>18</sup> engraved on one face with a combat of warriors in genuine Minoan technique, and on the other with a Hellenistic replica, vigorous enough, but misrepresenting some unfamiliar details.

On the other side of the comparison, the evidence collected by Nilsson, and the particular instance of a continuous cult in the 'Cave of the Nymphs' in Polis Bay in Ithaca, from Late Minoan to Hellenic times, shows how legends associated with sacred or historic sites were transmitted orally through long periods of time.

The caution imposed by this wide class of evidence is that even a graphic description of a masterpiece of craftsmanship, of Minoan or any later period, does not prove the author of it to have been of that period himself, but only that he was an observant and perhaps travelled person, professionally expert in traditions, and interested in 'pieces of antiquity' which illustrated his narratives. A later example is the *Kúπιος χακκήρ* of the fugitives in the *Suppliants* of Aeschylus.<sup>19</sup> Cyprus preserved many archaic features in the fifth century, but it had also in its sanctuaries long series of quaintly-clad votive statues going back to the seventh century and perhaps earlier. So too the messenger in the *Rhesus*<sup>20</sup> identifies the equipment of the Thracian prince by the tinkling of bells, like those recovered from the rich tombs of Scythian chiefs.<sup>21</sup>

#### *Homeric Art compared with Minoan.*

We are therefore not precluded by the long perspective in time, from comparing Homeric Art with Minoan in respect of their principles and techniques, without prejudging the historical mode of their contact. Both are vividly naturalistic; both are in this respect remote from the humanism of historical Hellas. But how close is this resemblance, and has it the same or independent origin?

Before attempting to compare Minoan craftsmanship with Homeric, the principal varieties of Minoan representations must be distinguished and characterized.

<sup>16</sup> IX, 40-1.

<sup>17</sup> Nilsson, *Myx. Origins of Gr. Mythology* (1932), 47.

<sup>18</sup> *PM* III, fig. 79, 80 b.

<sup>19</sup> I. 282.

<sup>20</sup> I. 308.

<sup>21</sup> Minns, *Scythians and Greeks*, Index, s.v. 'Bells'.

(1) Fundamental, in the finest work, from a remarkably early phase onward, is the free-field naturalism which claims the whole surface of the decorable object as a *tabula rasa* or canvass, on which the decorator projects, unconstrained, the subject of his design: fine examples are the tulip vases from Melos,<sup>22</sup> the lily vases and frescoes from Knossos,<sup>23</sup> and the 'goat and kids' in faience.<sup>24</sup> These are choice natural objects without context, like Homer's description of the *moly*-plant (*Od.* X, 202-5), as it grows from root to flower: the word *φύσις* is here purely verbal, and gives a time-dimension.<sup>25</sup>

(2) Such topics dominate scenes or episodes of wild life, and provide the background for the 'Roller-bird,' 'Cat and Pheasant' and 'Saffron-gatherer' frescoes,<sup>26</sup> but are no longer the centre of interest.

(3) These episodes or topics in turn are combined into frieze-scenes, where the background is continuous, but one figure succeeds another as principal object, from the rhythmic sequence of quails and other birds in the 'Caravanserai' fresco,<sup>27</sup> the Melian 'Flying Fish' <sup>28</sup> and the river-pageant of the 'Cat Dagger',<sup>29</sup> to the 'Cupbearer' <sup>30</sup> and the 'Ladies-in-Blue': <sup>31</sup> for these subjects now include human affairs, as far back as the 'Fisherman Vase' from Melos.<sup>32</sup>

(4) Next, synchronous but diverse elements or aspects in a concerted activity—the successive positions of the acrobat in the 'Bull Fresco' <sup>33</sup> presented as simultaneous positions of successive performers; the hunters on the 'Lion Dagger',<sup>34</sup> of which more must be said later; the performers and spectators of the 'Miniature Frescoes',<sup>35</sup> with a certain unity of purpose in their inward-facing groups, however 'wide-angle' the spatial range of the whole scene. They are no longer merely consecutive frieze elements, but rhythmic or pedimental about their architectural 'grand-stand'. <sup>36</sup>

In the Minoan palaces, scale and complexity varied with position and available space. But even in the palaces there were limits, especially of height, and consequently there was opportunity, and inducement, to simplify composition by reducing height and exploiting width or length, in corridor-friezes: a tendency reflected in such minor compositions as the 'Gladiator Vase' <sup>37</sup> and 'Harvester Vase' <sup>38</sup> from Hagia Triadha, the 'Bull and Athlete' panel <sup>39</sup> from Tiryns, and the 'Worship' panel <sup>40</sup> from Mycenae. Conversely,

<sup>22</sup> Bossert, 449.

<sup>23</sup> *Ibid.*, 243-7, 344.

<sup>24</sup> *Ibid.*, 239-60.

<sup>25</sup> For the fundamental principle of Minoan art, see Matz, *Die Frühkretischen Siegel*, especially the contrasts with Egyptian and with Mesopotamian art.

<sup>26</sup> Bossert, 224, 245, 246.

<sup>27</sup> *Ibid.*, 230.

<sup>28</sup> *Ibid.*, 450.

<sup>29</sup> *Ibid.*, 170-71.

<sup>30</sup> *Ibid.*, 231.

<sup>31</sup> *PM* I, 344-7.

<sup>32</sup> Bossert, 445.

<sup>33</sup> *Ibid.*, 239, 246.

<sup>34</sup> *Ibid.*, 168-9.

<sup>35</sup> *Ibid.*, 233-5.

<sup>36</sup> *PM* II, 46-65, pls. XVI-XVIII.

<sup>37</sup> Bossert, 271-75.

<sup>38</sup> *Ibid.*, 276-81.

<sup>39</sup> *Ibid.*, 38-9.

<sup>40</sup> *Ibid.*, 43.

in the 'plant' frescoes from Amnisos<sup>41</sup> and Hagia Triadha,<sup>42</sup> and in the 'Lily Vase' from Knossos<sup>43</sup> width is subordinated to height, in panel-compositions with bilateral symmetry and architectonic *crescendo*.

On minor fields and decorative designs space was still more strictly limited. Hence the supreme interest of the engraved sealstones, where height and width are commensurate; whereas the vase-painters were demoralized by wheel-made technique, and restricted to zone-fields, broken in turn by handle-spaces into panels, and panels into 'triptychs' of centre and side panels.<sup>44</sup>

But in Minoan design neither dimension passed out of control, as length did in Mesopotamian and Anatolian friezes and cylinder-designs.<sup>45</sup> In vase-painting, moreover, friezes and zones were further delimited by the fact that only one segment of the circumference is in view. On the 'Cat Dagger', a subject as endless as the Nile is terminated by the dimensions of the blade, and resumed on the other side of it: once again a frieze-subject is broken into panels. The same happens on the 'Lion Dagger', the Vaphio Cups, and the Cypro-Mycenaean kraters with chariots, bulls, or birds.<sup>46</sup> Though most of our examples come from a few palatial sites, the uniform style and execution of the frescoes, at Knossos, Phylakopi, Tiryns, and Mycenae, the wide popularity of the painted pottery, and the frequent use of seal-stones, testify to general appreciation of fine workmanship. The very simple silhouette draughtsmanship of the frescoes has to be considered in relation to the rarer relief work with elaborate colouring, of which the flat wall-decoration is an epitome, as the ingenuous and grotesque men and women on the pottery are the bazaar-equivalent of the stately palace-figures. They testify to a popular demand, to which the potters responded as best they could. The mass-produced crowds in the 'Miniature Frescoes' at Knossos show the same improvisation in higher quarters. The long and pathetic decadence is itself evidence of an inherited love of ornate if no longer very beautiful things: here too the craftsmen are doing their best to perpetuate a receding phase of well-being.

The significance of this will appear later (pp. 248-9).

<sup>41</sup> Bossert, 243.

<sup>42</sup> *Ibid.*, 244.

<sup>43</sup> *Ibid.*, 344.

<sup>44</sup> *Ibid.*, 456-58, 475-83.

<sup>45</sup> To describe Minoan representative art as 'frieze art' is not inconsistent with the presentation of it by Matz, *Die Frühkretischen Siegel*, as a free-field style capable of extension equally in two dimensions, i.e. width and height: compare Furumark's contrast between 'zonal' and 'unit' compositions. This free-field quality is fundamental, and is well illustrated both on the earlier pottery, in the frequent

disper-patterns, such as the tomb-ceiling at Orchomenus, and on some of the Palace frescoes. But, in practice, limitations of height in buildings and the use of the wheel in pot-making restricted extension upwards and downwards, while leaving it free laterally. Where both dimensions are limited, as on the seal-stones, there is often neither top nor side: as on the seal-stones, there is often neither top nor side: an animal, for instance, is coiled with its feet on the circular margin, and background scenery appears above and below, as in the larger landscapes.

<sup>46</sup> Bossert, 438, 482-3.

*The Homeric Age is an artistic age.*

Whatever its date, extent in time, and material culture, the period of the poems was one in which poet and audience alike enjoyed fine craftsmanship, and were interested in technical skill: examples are the bow of Eurytus, the raft, bed, and brooch of Odysseus, the gardens of Alcinous and Laertes, the belt of Heracles, the armour of Agamemnon and Achilles, the cups of Nestor (*Il.* XI, 622 ff.; XXIII, 740 ff.) and of Thoas (*Il.* IV, 104). Among women's arts, weaving and ivory-staining are memorable: Paris brings Sidonian weaving-women as a present to his mother (*Il.* VI, 289-91), and their work is among her treasures, a gift worthy of Athena, a weaver herself; Achilles offers a skilled work-woman among his prizes (*Il.* XXIII, 705). Craftsmen are honoured; heroes, like their womenfolk, display their own skill on occasion. This is something quite as different from folk-memory of a past age, as from the commemoration of exhumed and exotic treasures, while it explains both. A people insensible of the beauty and interest of such things, do not make verses about them, but melt them down. Conversely, the Hesiodic *Shield of Heracles* both drew its technique and some of its subjects from engraved metal bowls of recognizable date, and contributed to the popularity of such subjects among the vase-painters.<sup>47</sup>

*Homeric descriptions classified and analysed.*

Homeric descriptions of works of art are of several kinds. *Purely tectonic* are the descriptions of weapons and armour, chariot and cart; ship with mast and sail, and Odysseus' raft; the cup of Nestor, the tripods of Hephaestus, the jewellery of Hephaestus and the Suitors; the weaving of Athena, Helen, and Penelope. *Decorative enhancement*, like the so-called 'irrelevant detail' in a simile, emphasizes the value and interest of tectonic masterpieces. Such enhancement may include technical details, but these are subsidiary to admiration of the work of art completed and in use. *Illustrative descriptions* of processes, on the other hand, apply the poet's observations to enhance and illustrate occasions in his narrative; the potter trying out his wheel (*Il.* XVIII, 599), the fisherman casting a net (*Il.* XVI, 406) or a weighted hook (*Il.* XXIV, 80), the goldsmith over-gilding silver (*Od.* VI, 232), the smith tempering an axe (*Od.* XI, 291). The Homeric descriptions of weapons and furniture have been much discussed, and belong rather to the general archaeology of the epic. Only a few points need be noted here, because of their evidence for date.

<sup>47</sup> Myres, *JHS* LXI, 12-38; for the converse view that the poem borrows from the vase-paintings, see R. M. Cook, *CR* 1937, 204-14, and footnote 98 below.



A. *Objects of Minoan workmanship.*

The use of blue glass-paste for inlaying—not for fused enamel-work, as is sometimes stated, but sometimes for glazed tiles and beads as in Egypt—and of polychrome inlay of various alloys, is peculiar to Minoan work; blue pigment is also freely used in fresco-painting. Tin, on the other hand, though rarely employed in Egypt, and probably exotic there,<sup>48</sup> does not occur in the Aegean at all, except alloyed in bronze.

*The Cup of Nestor* is the more remarkable, for not only are the 'four' handles, with their perched birds, reproduced in the characteristically Minoan twin plate-handles of the gold cup<sup>49</sup> from Mycenae,<sup>50</sup> but the support beneath each pair of handle-plates, though an afterthought, is of normal Minoan rivet-work. This cup, therefore, like Nestor's, was an ancient and mended treasure already. Patchwork like this, on the other hand, might be later, if a later date could be proved for the rivetting. It was almost inevitable sooner or later with a cup of this rickety construction.

*The Helmet of Meriones* (II. X, 261-5) is another heirloom, a well-known Late Minoan construction of boar-tusks on plaited leather,<sup>51</sup> represented in use on an ivory mirror-handle from Cyprus<sup>52</sup> which may be as late as 1200 B.C. but not later. It is there worn with a circular shield, with concentric ornament, slung over the warrior's back with a *telamon*; and his sword is of the new leaf-shaped pattern, of the Cypriot variety with prominent midrib, though he uses it for thrusting.

The great *Shield of Achilles* and the *Breastplate of Agamemnon* are reserved till the whole position is clarified by the study of post-Minoan objects. Both reveal acquaintance with polychrome inlay in metals.

B. *Objects of post-Minoan workmanship.*

The *Wheeled Tripods* of Hephaestus (II. XVIII, 375-7) are usually compared with those of the Early Iron Age, from several sites and frequent representations, reinforced now by an example in the handsome votive series from the Cave of the Nymphs in Ithaca.<sup>53a</sup> There is only one difficulty. Any one who has tried to trundle a tripod, or a three-legged stool, knows that it won't run by itself; and if you push it harder, it capsizes. On the other hand, a *four-wheeled* stand, the Minoan equivalent—though there are also Minoan tripods—runs easily, and was preferred also for large and heavily laden vehicles like the 'lavers' of Solomon's Temple, which—whatever the

<sup>48</sup> E.g. a tin flask in the Ashmolean Museum, of the XVIII Dynasty.

<sup>49</sup> Bossert, 148.

<sup>50</sup> Cf. Furumark, *Erans* XLIV, 41-53, who takes a different view.

<sup>51</sup> Bossert, 57-60.

<sup>52</sup> *Ibid.*, 491.

<sup>53a</sup> Benton, *BSA* XXXV, 58-9, fig. 15, pl. II. Cf. *ibid.*, 88-9.

date of the description—are themselves precisely dated to the generation before 900 B.C.<sup>53</sup> This four-wheeled type seems to disappear later. The poet of *Iliad* XVIII, then, lived when tripods were normal, but he had seen (or heard of) vehicles which *could* also run.

'Earrings, three-lobed, mulberry-wise', such as Eurymachus gave to Penelope (*Od.* XVIII, 297-8; *Il.* XIV, 182-3), are no less characteristic of a period and style of craftsmanship. A common Late Minoan earring at Enkomi consists of a thin long hook of gold wire, on which is sometimes threaded a pendant of hollow gold plate, embossed to the shape of a bunch of lotus-flowers, itself perhaps misrepresenting a bull's head, which is also frequent.<sup>54</sup> This type is superseded, in the Early Iron Age of Cyprus,<sup>55</sup> and rather later in Etruria, by a crescent of gold, either hooked through the ear, or tied by loops on its perforated tips. From the middle point of the crescent hangs a cluster of three or four gold balls, or a pyramid of smaller balls, and sometimes pyramids of small balls are added to the larger. This type in turn was superseded in Cyprus in the seventh and sixth centuries by silver earrings, which have the same crescent body but a nail-shaped appendage or a palmette instead of the cluster of balls.<sup>56</sup>

*Aphrodite's Charm.* From Cyprus comes also the close parallel to the *καρπὸς ἱμῶς* which Hera borrowed from Aphrodite (*Il.* XIV, 214). This was not a belt, for it was worn on the breast and could be concealed by the clothing. It was of leather, embroidered, and in it (or on it) were objects symbolizing *φιλότης*, *ἡμερος*, *δαριστεύς*, *πάρφασις*, among *θελκτῆρια πολλά*. Such belts of charms are frequently worn by female votaries—or figures of the 'Paphian goddess'—from the beginning of the period when such figures in clay or stone were made, about the eighth century, and later also by the votive 'temple-boys'.<sup>57</sup> Among the charms are signet-rings—to carry magical symbols or inscriptions—a breast grasped in a hand, disc-pendants, sprigs of coral, crosses, *ankh*-signs, and heads of the oriental god *Bes*. They are common in all the greater sanctuaries of Cyprus. Similar charms in gold, silver, and Egyptian glazed paste, are frequent among bead-necklaces in the richer tombs, from the seventh century to the fourth. Of earlier date, and secular use, is the negro's head, with other pendants, in the 'Necklace Fresco' at Knossos: <sup>58</sup> compare the bullshead pendants from Hagia Triadha.<sup>59</sup>

<sup>53</sup> *I Kings*, vii, 27-37; Burney, *Kings*, 91-2; Myres, *PEQ* 1948, 38; *Brit. Mus. Exc. Cyp.*, fig. 18 (the best dated, from Enkomi in Cyprus, not later than 1200 B.C.); Furtwängler, *Sitzb. k. Bayr. Akad. Wiss.* (ph. hist. Kl.) II, 3, 1899 (the most perfect).

<sup>54</sup> *Brit. Mus. Exc. Cyp.*, pls. VIII-XII, bullsheads 244, 403, 452-3; Myres, *Carniola Coll. Handbook* (N.Y.), nos. 3116-35.

<sup>55</sup> Ohnefalsch-Richter, *Kypros, the Bible, and Homer*, pl. CLXII, 9, CLXXXII, 1; *Carniola, L. P., Cyprus*,

pl. 54; Myres and Ohnefalsch-Richter, *Cyprus Museum Catalogue* (1899), pl. VII, no. 8003; Myres, *Carniola Coll. Handbook*, nos. 3162-75; Halbig, *Hom. Ep.*, 274, figs. 97-98 (Etruria).

<sup>56</sup> *Cyp. Mus. Cat.*, 4023.

<sup>57</sup> Ohnefalsch-Richter, *Kypros, the Bible, and Homer*, pl. XI, 4, 5, 6; XXXIII, 3; LXVIII, 13; XCIII, 2; CCX, 4; jewellery, XXXVIII, 18, 19; LXVII, 7, 12.

<sup>58</sup> Bossert, 236.

<sup>59</sup> *Ibid.*, 385.

These comparisons with works of art from Cyprus are the more significant in their historical and literary background, because they all come from the centuries between the ninth and the sixth, when such evidence is rare in the Aegean. The cities of Cyprus were still ruled by kings until the fourth century, and the priest-king at Paphos lasted till the Roman conquest. The royal family of Salamis traced its descent from Teucer, brother of Ajax of Saronic Salamis, the founder of the Hellenic settlement which replaced a great Minoan town at Enkomi ■ little inland. The palace of another of these dynasties, at Soloi, has a general resemblance to the layout of a Minoan palace, and belongs essentially to the eighth and seventh centuries.<sup>60</sup> Chariots were still used in war in Cyprus during the Ionic Revolt.<sup>61</sup> And the Cypriote syllabary, used both for Greek and for an indigenous language,<sup>62</sup> is directly descended from the Minoan, which was introduced not later than the thirteenth century, and probably earlier, for it is more nearly related to the 'Linear A' script than to the later 'Linear B' of Knossos.

There was, therefore, in Cyprus, which had no 'Dorian Conquest', closer continuity between Minoan and Hellenic than in the Aegean; the only serious crises were earlier—the Minoan colonization in the fourteenth or fifteenth century, and the 'Achaean' settlements at Salamis and elsewhere, closely dated to the Sea-raids of the early twelfth century. Here then, if anywhere, there was continuity of court-life, and popular memory; and it was hence that the 'Cyprian Verses' (τὰ Κύπρια ἔπη) were transmitted back into the Aegean, when sea-traffic was restored, and especially during the 'Cyprian Seapower' in Eusebius' *Thalassocracy List*,<sup>63</sup> which is precisely dated before the Phoenician and Egyptian seapowers, and therefore to the years 732-709 B.C.: for the Assyrian conquest of Cyprus was in 709 B.C.

### C. *The Sea Power of Cyprus and the 'Cyprian Verses'.*

It was during this 'Cyprian Seapower' that the Aegean peoples had their brief acquaintance with the Ethiopians, of which there are glimpses in *Il.* I, 413-25, *Od.* I, 22-5, V, 282-3, a distant people famed for their hospitality to the gods, of which Herodotus<sup>64</sup> preserves the memory in his 'Table of the Sun'. There were eastern and western Ethiopians, but Poseidon's hosts were eastward, for on his return he describes Odysseus from the 'mountains of the Solymi' in Lycia (*Od.* V, 283; cf. *Il.* VI, 184, 204). M. Mireaux<sup>65</sup> has recently noted that the historical period of Ethiopian contact with the Mediterranean (c. 750-666 B.C.) has its climax with the

<sup>60</sup> *Swedish Cypr. Exped.*, III, 399 ff.

<sup>61</sup> *Hdt.* V, 119.

<sup>62</sup> *Brit. Mus., Exc. Cypr.*, 27, figs. 58-60.

<sup>63</sup> Myres, *JHS* 1906, 84 ff.

<sup>64</sup> III, 18.

<sup>65</sup> *Les Poèmes Homériques* (Paris 1948), ch. iv.

reign of Bocchoris (Boken-ranf, 734-728 B.C.) whose name appears on a vessel of Egyptian glaze-paste from a rich tomb at Corneto.<sup>66</sup> Sir Alan Gardiner, however, tells me that 'from Dynasty XXI onwards relations between Lower Egypt and Upper Egypt must have been very close, and the Tanite rulers were doubtless very familiar with all the Eastern Mediterranean. . . . The Ethiopic rule began with Kashta's capture of Thebes about 750 B.C. and ended about 654 B.C. . . . Tahutamūn, the last Ethiopic king who ruled in Thebes, was only recognized there for a few years after the Assyrian conquest of 668 B.C.'

Into this context the narratives of Menelaus (*Od.* IV, 83-5, 355 ff.) and of Odysseus (*Od.* XIV, 246 ff.; XVII, 426-44) fit very well. As Rhys Carpenter has shown, Pharos island (*Od.* IV, 355) is located by its sailing distance not from the Canopic mouth of the Nile on which Naucratis lies, but from the Bolbinitic (Rosetta) mouth which leads to Sais; and the conjunction of a Greek king in Cyprus with a Phoenician trading with Libya (*Od.* XVII, 443; XIV, 288) is in accord with the relations of Kinyras with Agamemnon (*Il.* XI, 20-22). The gift of Kinyras should be compared with the presents of the Egyptian Polybos and his wife Alkandre (with a Greek name) to Menelaus and Helen (*Od.* IV, 124-32), also rich metal-work, cups, tripods, bath-tubs, spindle and wool-basket. Helen's other friend, also, Polydamna, wife of Thos, has a Greek name (*Od.* IV, 228) and gives a glimpse of Egyptian medical skill.

All this is quite consistent with folk memory among Aegean peoples of the twelfth century Sea-Raids, but the historical circumstances did in fact repeat themselves in the eighth and early seventh centuries, in the Levant, though not in the continental regions surrounding it.

#### *Alternative Dates for Homeric Works of Art.*

A. *The Breastplate and Shield of Agamemnon* (*Il.* XI, 17-46) and the *Shield of Achilles* (*Il.* XVIII, 474 ff.).

These are more complicated. There are allusions to inlaid metal of divers colours, to inlaid *kyanos* (*Il.* XVIII, 564), to monstrous figures, *Eris*, *Kudoimos*, *Kēres* (*ibid.*, 535), like the Minoan gryphon, and to friezes of human activities, like the 'Lion Dagger'. Rhys Carpenter, in *Folklore, Fiction and Saga in the Homeric Epics* (1946), 28, denies that the epic knows Minoan metallic inlay; but in making the armour of Achilles (*Il.* XVIII, 474-5) Hephaestus provides gold, silver and tin as well as bronze, and in the description the poet mentions objects of gold, 509, 517, 549, 562, 574, 577, 598; silver, 598, 608c; tin, 565, 574, 608a; bronze, 522, 534, 608d; *kyanos*,

<sup>66</sup> Randall-MacIver, *Villanovans and Etruscans*, pl. 31, 10; Montelius, *Civ. Prim. in Italia*, pl. 295.

564, besides black, 548, 562, 583, and white 529, 560. The armour of Agamemnon (*Il.* XI, 24-5, 33-5, 39-40) has gold, silver, tin, and *kyanos*, as well as bronze. If the rim of a 'figure of eight' shield, of the Shaftgrave period like the 'Lion Dagger' were grooved and filled with a frieze of scenes in the technique of that and the 'Cat Dagger', and on that scale—about an inch wide—the necessary figures for the scenes described in *Iliad* XVIII would about fill the length of such a shield-rim, about seventeen feet for a shield of five feet diameter. But there are several difficulties: (1) the fragility of such a long and flexible composition; (2) the inconspicuous result of so much meticulous labour; (3) the poet's description of his shield-rim as filled with a 'stream of Ocean', some form of wave-ornament or running spiral, not a frieze of figures; (4) the partition of the frieze itself by statical 'pilaster' groups—the two cities (400 ff., 509 ff.), *Eris* and *Khr* destroying corpses (533 ff.), and the lion-hunt (574 ff.), which are inconsistent with the distribution of the series on such a shield-rim: for this had only two pauses, where it was bent at the ends of its *παρῶσι*.

The only alternative is of far later date. It is supplied by the concentric friezes engraved on metal bowls probably of Phoenician or Cypriot workmanship. They are found, widely distributed, from Nineveh to Etruria, with a cluster in Cyprus, and another in the Idaean Cave in Crete. Their dates are from the end of the seventh century backwards; and as their form and zone-ornament go back to an Egyptian sample, of the Eighteenth Dynasty, they may be of very different ages. In the Homeric repertory they are represented by the gold-rimmed silver bowl of Thoas (*Il.* XXIII, 740 ff.), and of Menelaus (*Od.* IV, 615 ff.), though this is not described as decorated. They are specifically from Sidon.

This alternative is strongly supported by the Hesiodic *Shield of Heracles*, a deliberate versification of a masterpiece of metal-work; the repertoire of which, and the lay-out of its friezes and panels, is closely related to the engraved bowls, and includes terrific figures such as *Deimos* and *Phobos*, which occur also in the Homeric descriptions. Here there is no polychrome inlay, and most of the scenes are from Hellenic mythology, warfare, and customs, with deities on the battlefield, as on the Shield of Achilles. I have dealt more fully with the *Shield of Heracles* in *JHS* LXI, 17-38, and with the Shield of Achilles in *Who were the Greeks?* (1930), 518-22. What is noteworthy in the Homeric descriptions—and distinguishes them from the Hesiodic—is the combination of the frieze-and-panel composition derived from the engraved bowls, with polychrome metal and *kyanos* from Minoan art. No wonder they said that 'Homer was blind'. In his visual world, form and colour, landscape and figures of animals and men, scenes of hunt-

ing and war, of palace-life and political meetings, are collected from many contexts, old and new, and combined in a Homeric World and a Homeric Age, which has become immortal mainly because it never existed outside Homer's vivid imagination. Like Hephaestus on the Shield of Achilles 'in it he set' scenes of real life, cities and people, in daily activities, but 'in it he set' also the Two Great Gods, and *Eris* and the *Kêres* tearing corpses. So too, on the ivory mirror-handle from Enkomi<sup>67</sup> the carver has recorded the boar-tusk helmet, shield 'full of bosses' and breastplate of many 'paths' of metal, but the sword is a sword from Cyprus, and the kilt is of Cypriot fashion. Are we debarred from regarding these details, or the combination of them, as the less valuable archaeologically, because the warrior is fighting with a gryphon?

B. *The Telamon of Heracles* (*Od.* XI, 610-14).

This was a sword-belt of gold, or goldplated, with a frieze of wild animals—bears, boars, and lions—and groups of fighting and slaughter. It combines frieze-composition with statical combat-groups, like the Shield of Achilles. There is no hint of colour-inlay, and the bears are outside Minoan repertoire, and very rare on the Oriental bowls.<sup>68</sup> But the bear was known in early Greece, in the Arcadian story of Callisto, and as a name of the 'Wain' constellation. Here it is a test of the craftsman's repertory alongside the familiar boars and lions of the similes, where the bear does not occur. Technique and purpose alike associate this object with the Oriental bowls and other embossed metalwork.

C. *The Telamon of Agamemnon* (*Il.* XI, 38-40).

This belt was of silver or silverplated. Its serpent-design was of *kyanos*: inlaid, therefore, like the shield to which it belonged. The triple heads, presumably at each end, mark the increased breadth of the strap where it was fastened to the shield-rim. Nilsson<sup>69</sup> has noted (against Poulsen) that snakes are not used decoratively in Minoan art, but become common in Geometric and Orientalizing. There is, however, a common Minoan decorative pattern which Evans derives from ■ snake-skin;<sup>70</sup> the boundary between symbolic and decorative design is nebulous. Have not some of these later snakes symbolic value? Here, too, Minoan technique is associated with Orientalizing design.

<sup>67</sup> Bouert, 491.

<sup>68</sup> Margaret Heinemann, *Landschaftliche Elemente in der griech. Kunst bis Polygnot*, Bonn, 1910, quoted by Nilsson, *Homer and Mycenae*, 126, n. 2.

<sup>69</sup> *Homer and Mycenae*, 125.

<sup>70</sup> Evans, *PM* IV, 188, 195 and Index s.v. 'Adder-mark'.

D. *The Brooch of Odysseus* (*Od.* XIX, 226-31).

It is described as a *περόνη* (*Schol. B.*, 227 calls it *πόρπη*) which only denotes that it was designed to perforate something<sup>71</sup>—in this instance a cloak. (1) The ancient commentators are not helpful: *Schol. V.*, διπλαῖς ἢ συμφύσει περόναις suggests a fibula with two pins in long straight catch-plates: ῥάβδοις εὐθείαις, εἰς ὧς κατακλείονται αἱ περόναι; and there are a very few twin fibulae of this type in North Italy. One, of the Second Period at Este (1000-900 B.C.), has a single pin but triple bow carrying a chariot with three horses.<sup>72</sup> By this time, at Este, interest in wild life was giving place to fondness for domestic animals and genre-scenes. Another, of the Third Period at Este (800-700 B.C.), has the bow wholly fashioned as a horse, with the spring and catchplate beneath the hind feet and fore feet respectively.<sup>73</sup> From Etruria are similar zoomorphs: a horse ridden by a monkey;<sup>74</sup> a sphinx in gold, sitting on the spring and holding the long catchplate in its forefeet.<sup>75</sup> (2) On the other hand, the confused description in *Schol. B.*, ἀνοτάσσει δυοῖ . . . ἐπ' ὤμων τῆς πόρπης ἐξημμένους suggests rather the rare type of belt-clasp—not a fibula—in which two (or three) pins on one half fit into tubes on the other, to keep both halves in place; the actual fastening being by hook-and-eye underneath. One of these clasps, for a broad belt or multiple necklace, has three 'tubes', surmounted by six sphinxes;<sup>76</sup> another, also from Etruria,<sup>77</sup> has two, with similar (damaged) figures above. It would be difficult to design such a clasp with a single large centrepiece, for it is essentially in two pieces. (3) The vigorous naturalism of this centrepiece—hound devouring fawn—vividly recalls Minoan gold work and gem-cutting, earlier than any known fibula. The nearest analogy is a lion-with-fawn in bone (for lack of ivory) of a class of fibulae common in the sanctuary of Artemis Orthia at Sparta about 700 B.C.;<sup>78</sup> compare an ivory plate, probably from a similar fibula, from Etruria, with a lion carrying a prostrate man on its back.<sup>79</sup>

As this ornament is introduced into the story as a rarity, we are fortunate to have so many actual counterparts. On the other hand, the poet's audience would expect something not wholly unfamiliar, and (above all) not out of date. In a modern novel, the long-lost hero is not recognized by a snuffbox or a repeater watch, but by a cigarette-lighter. In the light of the com-

<sup>71</sup> In modern Greek *περόνη* is a tablefork.

<sup>72</sup> Montelius, *Civ. Prim. en Italie*, pl. 51, 4.

<sup>73</sup> Montelius, *ibid.*, pl. 51, 4.

<sup>74</sup> Montelius, *ibid.*, pl. 295, 6.

<sup>75</sup> MacIver, *Villanovan and Etruscan*, 164, fig. 67; cf. Montelius, *op. cit.*, pl. 371, 1-2. Three examples, Vetulonia (Lictor Tomb), MacIver, *op. cit.*, pl. 28, 4. From Olympia is a lion resting on hinge and catch-

plate, with two pins, Blinkenberg, *Fib. grecques et etr.*, 35, 280, fig. 319. Several lions from Sparta, *Artemis Orthia*, pl. LXXXVIII ff.

<sup>76</sup> MacIver, *op. cit.*, fig. 67.

<sup>77</sup> Helbig, *Ephe*, 277-8, figs. 99-100. Nilsson, *Hom. and Mycenae*, 124, fig. 27, top.

<sup>78</sup> *Artemis Orthia*, pl. CXLIX ff.

<sup>79</sup> MacIver, *op. cit.*, pl. 40, 6.

bination of technique and design in the great shields, it need not surprise us if a Minoan naturalistic representation decorates a personal ornament of the eighth or seventh century.

*Homer himself the Artist.*

This combination is indeed the solution of the paradox and dilemma. The poet *knows* both Minoan and Orientalizing techniques and styles, and combines them into descriptions of objects which never existed in Greek lands. Hence the vivid and convincing quality of his descriptions: for he is himself the craftsman as well as the narrator. *How* he knew the styles and techniques of so different periods, an attempt has been made here to explain. His sources were diverse, eyewitness, folk-memory, travellers' tales; but to this *ὄψις* and *ἔκωή* he could add, *πρῶτον δὲ καὶ τῆς ἐμῆς γυνώμης*. It is the same method as that of Hesiod in the *Shield of Heracles*, but with incomparably wider range of experience. All that follows from this observation as to the date and circumstances of the poet, is that it is a *terminus ad quem*, the final moment of his survey of long time and wide experience. It is the same with the topography of Troy and of Ithaca, and with the Lakeland of Wordsworth.

*The Homeric Similes as Representative Art.*

With the descriptions of human or divine activities on the Shield of Achilles and other masterpieces, it is now necessary to compare the similes with similar content, noting that even if the poet introduces such scenes in the frieze decoration of the Shield, the incidents are distinct, and separately described, with an economy of essential figures, seldom exceeding eight in a scene, though some of these may well have been contemplated as small groups, for example, the reapers, vintagers, and fighting men.

These illustrative descriptions, in turn, pass over into the general category of similes derived from wild nature. In these there is still an external object or material situation; but what interests the poet, in describing this, is primarily its relation to his narrative, however graphic his characterization of it; his use of a time-dimension to enhance its interest, or his decorative enhancement of his own literary work. This narrative element in the similes makes it less easy to compare them with seal-stones and other works of art, which are limited to a single moment of time. Only rarely, in a frieze-subject, like the 'Lion Dagger', the 'Cat Dagger', and the Vaphio Cups, does a work of material art record more than one such moment, repeating the essential figure. The two Vaphio Cups, for example, are excerpts from the same frieze-episode of cattle-chasing: the two sides of the 'Cat Dagger'



amplify the essential topic of cat-chasing-waterfowl, also within the limits of a frieze.

It is at this point that it becomes useful to compare the repertory of Homeric similes with that of other kinds of miniature representations, and especially with the engraved seal-stones and signets, so copious and admirable in Minoan culture, so completely absent from Homeric.

Of two hundred and five similes in the *Iliad*, sixty-seven describe natural occurrences—wind, clouds, sea and rivers, stars and fire—not easily represented pictorially; sixty-two are from animals, and of these twenty-nine are lions; seventeen are from birds, seven from insects and other living things; seventeen from plants, trees, and crops; thirty-one from human affairs other than crops, cattle, horses, or lions; two from human memory and dreams, also unpicturable; five from gods or mythical creatures—*Eris* and *Phobos*—suggested by works of art.

Of ninety-three in the *Odyssey*, four describe natural phenomenon; five are from plants; four from lower animals; fifteen from birds; sixteen from animals, including six lions; twenty-one are from men and their works, including one dream, one ghost, one shadow; nine from women; ten from gods, goddesses and heroes. They are thus less frequent than in the *Iliad*. There are also often mere mentions of the name (twenty-nine) without description or activity. Only a few are narrative-similes, with a time-element: wolves (*Il.* XVI, 157 ff.), analysed below; the widow mourning her slain husband, then carried into captivity (*Il.* VIII, 523); the doe hiding her fawns in a lion's lair, then surprised by him (*Il.* IV, 335; XVI, 126). Account should be taken of the omens from birds, which are similes in action, portending and illustrating events: eagles, *Il.* II, 146, XV, 161, XX, 24; with Penelope's geese, XIX, 535; a hawk, XV, 526, and unspecified birds, XXIV, 311.

In its elementary form, the simile, like the seal-device, is statical: it depicts an object or a situation, of momentary value in time; and this is what explains and justifies artistically the presentation of an animal in mid-leap, or a flying bird. But there are other similes, especially in the *Iliad*, which are word-pictures, like the sequence in a frieze, or a set of metopes, or a film, recording two or more phases of an action, in an order of time.<sup>80</sup> The wolves in *Iliad* XVI, 157 ff. have (1) pulled down a stag and eaten it; (2) have gone as a pack to drink at a spring; (3) are now ready for more ravaging—*περιστένεται δὲ τὰ γαστήρ*. For the point of the comparison is three-fold: the Myrmidons have (a) fought before; (b) refreshed themselves; (c) are now eager to fight again.

<sup>80</sup> They are relatively frequent in the *Iliad*; other examples are *Il.* XV, 362; XVI, 157; XVII, 725; XVIII, 318; XXI, 257; XXIII, 634.

These longer and literally more *eventful* similes pass over into the narrative episode, inlaid in the main story, on various pretexts and occasions: the single combats of the *Iliad*, the 'yarns' of Nestor, Odysseus, and Eumaeus in the *Odyssey*, and of Phoenix in the *Iliad*; the dialogues, debates, and other verbal encounters. These are of various lengths and elaboration; but they have the common characteristic of 'observing the unities' of time, place, and agent.

The pictorial analogue is the use (already noted) on the 'Lion Dagger' and the Vaphio Cups of twin 'fields' or 'panels', to link together a pair or triad of episodes, and illustrate, by their variety and contrast, the qualities or activities of their protagonist. Though each episode is self-contained, the Vaphio Cups are already passing into frieze-composition, though, on a cylindrical object, only part of the picture can be seen at one time.

Moreover, within a single field or panel-composition, as within the more eventful similes, figures may be grouped so as to illustrate phases of the same action. On the 'Lion Dagger',<sup>81</sup> one warrior (on the left) is about to hurl his spear from afar; the third advances to close quarters; the fourth, now attacked, crouches behind his shield; the fifth, foremost in frieze order, is latest in time, for he has lost his shield and been prostrated. All these are phases through which any one warrior may pass, as well as a composite team of five persons, engaged in the same hunting episode. The second figure, however, an archer, is another person, crouching behind the shield of the third.

On the gold 'Warrior Signet',<sup>82</sup> one warrior is about to strike, another has been struck, a third has been disabled; the fourth counterattacks behind him. On the 'Siege Vase'<sup>83</sup> and the 'Harvester Vase'<sup>84</sup> there is variety of equipment and pose.

From the narrative-subjects it is not far to fully developed frieze-composition, wherein a sequence of such incidents, more or less homogeneous, is presented in rapid succession. The special scheme, in the *Iliad*, where one combatant is always the same, is reserved for separate consideration (p. 246). Such battle-friezes, in the *Iliad*, composed of many single combats, fill intervals in the main narrative, like a diaper-background, or the massed and gesticulating crowd in the 'Miniature Frescoes' at Knossos. A much later instance is the Macmillan Vase<sup>85</sup> in the British Museum, on which only a small section of the frieze of warriors can be seen at one time, but every section of it has its value as a composition, and there is no centre-piece. An example in Minoan art is the 'Gladiator Vase'<sup>86</sup> from Hagia

<sup>81</sup> Bossert, 168-9.

<sup>82</sup> Bossert, 398.

<sup>83</sup> Bossert, 77.

<sup>84</sup> Bossert, 276-81.

<sup>85</sup> JHS 1890, pl. 1, 2; Johansen, *Les vases siciliens*, pl. 31.

<sup>86</sup> Bossert, 271-3.

Triadha; on the Vaphio Cups also there is no centrepiece, the frieze-episode consisting of two or more phases, set side by side, not combined into a single composition, as on the 'Warrior Signet' and the 'Lion Dagger'; and each is presented independently as the cup is turned round. The presentation of a series of metopes in later sculpture is similar, when their subjects are homogeneous. In the frieze of the smaller temple at Paestum, the fighting groups are consecutive but quite distinct, as though metope subjects had been juxtaposed.

In such metope compositions, each episode is self-contained; in a frieze, they overlap to form a *melée*, as on that of the Mausoleum. In sculpture they exist simultaneously; it is only in verbal narrative that they have to be presented in an irrevocable order of time, whether what is described is a *melée* or the progress of an ever-victorious hero. From such identification of one in each pair of combatants with a single persistent hero, results the epic device of an *ἐπισυναγωγή*, the cumulative prowess of Menelaus or Diomedes, Hector or Aeneas.

This device of the synthetic hero has, however, some curious equivalents. On the Cypriote relief of Geryon and Cerberus,<sup>87</sup> Heracles' greater stature enables him to cope with two superposed occasions, in a double frieze: (a) fighting with Geryon and his three-headed hound, (b) driving off the cattle, an event subsequent in time but combined in a single twin composition by this ingenious arrangement. By similar economy emerges the frequent Cypriote presentation of Heracles simultaneously brandishing his club in one hand and aiming his bow with the other, though no arrow is on the string.<sup>88</sup> That this is not clumsiness but deliberate duplication of the hero's prowess is clear from the myth embodied in a dedication, not earlier than the fourth century, to the *ἥρωας ἀμφιδέξιος*, 'fighting with both hands'.<sup>89</sup> It is further economy when a little lion scrambles up the hero's leg, waiting his turn to be 'dompted' bare-handed. An earlier example is the hunting scene on an ivory draught box from Enkomi,<sup>90</sup> Minoan or Syro-Minoan work of the thirteenth century. It is not to be supposed here that the single chariot-hunter is pursuing a dense mass of many sorts of game. He is, however, enjoying a full day's hunting in one panel.

In Homeric similes, too—but not in the *Odyssey*—there are sometimes opulent alternatives: 'cattle or sheep' (*Il.* XV, 323), 'oak, poplar or pine' (*Il.* XIII, 389); 'boar or lion' (*Il.* VIII, 328); 'bees or wasps' (*Il.* XII, 167); 'stag or wild goat' (*Il.* XV, 171); on any given occasion, either is possible, and both are presented to the audience without sequence in time.

<sup>87</sup> Metr. Mus. of Art, New York, *Handbook to the Cypriote Collection*, no. 1368.

<sup>88</sup> *Ibid.*, nos. 1092-1100; 1960; 4224.

<sup>89</sup> *Ibid.*, no. 1849.

<sup>90</sup> Brit. Mus., *Exc. Cyprus*, pl. 1.

The bilateral combats of one deity or hero with two lions, on seal stones of all periods, and the 'Persian Artemis' and similar compositions—whatever their origin in the Aegean—illustrate the same artistic and utilitarian motive. And the plural implies that the depicted activity is habitual and characteristic. Conversely in Hellenic art the *ἐπιστάλα* type of grouped episodes with a single hero gives occasion to such serial sculptures as the metopes of Selinus and the 'Theseum', showing the Labours of Heracles, and the Attic kylikes with the adventures of Theseus.

An extreme instance of *ἐπιστάλα*-composition is the 'Narrative of Wanderings' in the *Odyssey*, where the pictorial problem of the synthetic hero is solved, (a) by narration of adventures in a time-series; (b) by making the hero himself the narrator, and fixing the zero-hour of the story at a particular moment in the narrative of our *Odyssey*. There are, indeed, traces that these episodes—or some of them—were once independent tales, told in the third person *about* their hero, who, moreover, need not originally have been the same person, nor our Odysseus at all. The 'Killing of the Suitors', too, is in substance a straight-forward *ἐπιστάλα*, in third-person narrative, not autobiographical, as Homer *might* have let Odysseus tell it to Penelope; and some have thought that we have a conflation of two massacres, one with arrows, the other with spears.

On the other hand, the lists of separate Heroines and of Older Heroes in *Odyssey* XI are to be compared with the Hesiodic 'H oia', a commonplace-book of courtly similes, and, on the archaeological side, with the 'second zone' of the 'Chest of Cypselus',<sup>81</sup> where six at least of the subjects are adventures of women, and the centrepiece, *Medea with Jason*, is enhanced by the presidency of Aphrodite, as are so many episodes of the *Odyssey* by the presence of Athena. The number of 'Heroines' on the 'Chest' may be greater, if Pausanias has missed the meaning of what he calls *Diké and Adikia* and the *Two Women Pounding*. But the inclusion of *Atlas with Heracles* and *Apollo with Muses* shows that the composition was not a strictly balanced scheme. *Apollo with Muses* is equivalent to at least two 'two-figure' subjects: to this there is the parallel, in the 'fourth zone', of the *Judgment of Paris* with at least five figures, interpolated among 'two-figure' subjects, and adjusted by its 'one-figure' neighbour, the *Winged Artemis*. In this zone, too, the centrepiece, *Helen and Dioscuri*, with Aethra prostrate, is a more elaborate composition, like the *Medea* in the 'second zone'.

Comparison with the 'Chest of Cypselus' is the less far-fetched in view of the highly formal construction of the *Odyssey*,<sup>82</sup> with balanced episodes around centrepieces within a generally frieze-like sequence, like those of

<sup>81</sup> Pausanias V, 17-19; cf. *JHS* LXVI, 122.

<sup>82</sup> *JHS* at press.

the outer zones of the *Shield of Heracles* and the *Shield of Achilles*.<sup>82</sup> Pausanias' description is of the greater interest, because here we have seventh or sixth century commentary transmitted continuously for a very long period, when derived from a monument and authenticated by it.

*The Artistic Outlook of the Poets.*

When we turn from detailed processes of poetic or pictorial craftsmanship to general indications of style and of the choice of subjects for descriptive or pictorial treatment, the material on both sides of the comparison becomes more abundant, but its interpretation more difficult. We can supplement the evidence of gem-engraving from goldwork, of fresco from vase-painting, and concentrate attention on the achievements of all these crafts, as illustrations of an outlook and habit of mind, in the craftsmen, and in public estimation of this standpoint, and of achievements in the interpretation of natural beauty. But we are faced with the possibility—which we must examine more closely before we decide that it is also a probability—that technical and literary skill may not have kept pace, especially in a period like that which succeeded the Fall of Knossos, when material wealth diminished, oversea transport became precarious, and the best attested movements are those of marauders and their despoiled and expatriated victims. For in such times the musician, the dancer, and, above all, the poet have the advantage over the painter and the seal-cutter, that they are themselves the exponents of their art, they continue to create and to repeat, irrespective of any supply of raw-materials on which to impress their conceptions. What Hermes had done, creating the first lyre out of a tortoise shell, a Minoan minstrel could do; a shepherd's pipe could be cut from the nearest reed-bed; a mere rod could emphasize rhythm, or control a chorus. The immediate descendants of the Pilgrim Fathers made a poor show in personal ornaments or household gear, either of traditional design or of transatlantic invention; but their hymns and popular melodies, proverbs and jests, and all the verbal furniture of their lives, their Puritan and English heritage, remained living and copious, borrowing new topics from austere and unfamiliar surroundings, but perpetuating in essentials the folklore and the literature of their motherland, enshrined in their mother tongue, and expressing the same mother-wit and outlook on the world. Compare the survivals of drama in Thrace and Skyros; only the goatskins and the *men* survive. Of Czardom and its culture the living exponents are dancers, composers, and story-tellers.

<sup>82</sup> Compare Dr. J. T. Sheppard's analysis of the *Pattern of the Iliad* (1922), and my own article *JHS* LII, 264-95.

It is at this point that we must face the fact of the Minoan script, and of its survival in the syllabic script of Cyprus. Our knowledge of either is limited to texts on durable materials; but Greek tradition of palm-leaf documents,<sup>84</sup> the long narrow leaf-shape of the most frequent tablets at Knossos, the indisputable intercourse with Egypt, the form of many of the Minoan signs, so reminiscent of brushwork, and the preservation of a few inscriptions actually painted, make it certain that the Minoan culture was literate. In Cyprus, where the general continuity of culture is more evident, there is indeed an almost complete lacuna in the literary tradition; but the recovery from Cyprus, in due course, of a large residue of literary compositions, the *Kύπρια ἔπη*, can only be explained by uninterrupted transmission along with—and presumably in—a script derived from that of the Minoan settlers. 'Traditional books', like Puritan bibles, wore out in time; but Herodotus<sup>85</sup> knew that in the Ionian settlements there were writings on parchment before papyrus was introduced—or, as we may now suppose, re-introduced—from Egypt.

It is this consideration, of the greater ease with which the self-expressive arts can be transported by their exponents, which justifies us in examining seriously the view that the cradle of Homeric epic is to be sought in a period of Aegean culture—or, more appropriately speaking, of Aegean collapse—the material remains of which offer so little of the old vivid naturalism, or of its genius for composition and style. Compare the Homeric similes of a lion attacking a herdsman and his cattle (*Il.* XI, 172, 292, 376), first with the 'Lion Dagger'<sup>86</sup> and an engraved gold bead<sup>87</sup> from the Shaft-graves, and then with the representations on a bronze plaque or a painted vase of the Early Iron Age. In the first comparison, it is the craftsmen who sets the theme; in the second, the literary version may well have been the prototype, ringing in the ears of the artist. At a later stage still, while the Hesiodic *Shield of Heracles* is inspired by embossed and engraved bronze work, it is significant that subjects from it become popular with the vase painters of Athens and Corinth at a particular phase in the growth of those schools of art.<sup>88</sup>

A particular example, already noted, will illustrate these relations between literature and pictorial art. The engraved sealstones of Minoan times were at the same time self-contained works of representative art, and objects of practical use, and could be associated with other lovely or precious things

<sup>84</sup> Pliny *N.H.* VIII, 77.

<sup>85</sup> Herodotus, V, 58.

<sup>86</sup> Bossert, 168-9.

<sup>87</sup> Bossert, 398 c.

<sup>88</sup> Mr. R. M. Cook (*CR* 1937, 204-14) draws the

converse conclusion, that the poet of the *Shield* selected subjects that were popular with the vase-painters. But on the same hypothesis, did the poet of the *Iliad* collect the death of Euphorbus (*Il.* XVII, 59-81) from the 'Rhodian' plate?

in a necklace. In both functions, they seem to have gone quite out of use, as Minoan culture faded. They were easily lost, for they were worn on the wrist by a thread and quite irreplaceable, for they required minute and prolonged work on selected materials; and in troublous times seals on parcels are little regarded, and there is little of value to be sealed. Like the seal-stones, the Homeric similes have a double character: they are decorative enhancement of a narrative or discourse; but they are also self-contained literary achievements, small in scale, but choice in diction and significant in content. In Celtic, Hebrew, and Japanese poetry such minuscule compositions have had their vogue as a distinct category of literature. The 'staves' sung in moments of crisis by Norse heroes, and the epigrams of classical Greece, include many similes; and in a later phase of Greek epic the Hesiodic ἠοῖαι were a commonplace-book of similes drawn from folk-memory of distinguished women, compiled presumably for use, like the classified index in Pope's translation of the *Iliad* to the Homeric similes themselves, in an age when classical learning had its practical applications in the pulpit and the House of Commons.

In Homeric society, too, such comparisons were a device of highflown courtesy among well-bred persons. As heroes authenticate themselves by their pedigrees, and Odysseus fools the Cyclops by a bogus name, and the *Frogs and Mice* parody the manners of well-bred men, so Odysseus, in supreme need, established 'speaking terms' with Nausicaa (*Od.* VI, 148 ff.) with a bouquet of similes. Disfigured and disreputable as he is, he has to approve himself as a man of honour and breeding. He must make no mistake of manners, or the girl will run. So every word counts:

αὐτίκα μάλιστα καὶ καρβαλέον φάτο μῦθον· (148).

He begins by comparing her to a goddess, in particular to Artemis, young and carefree, and then to the palm-tree in Delos: a comparison far-fetched out of wide experience and correct taste; and to her unspoken question: "What were you doing in Delos?" out comes all that she needed to know. He has seen the world, he was a great chief,—and see what he is now! But (as Plüss observes<sup>89</sup>) poetical similes record states of mind and feeling, not intellectual comparisons. It is the uniqueness of Nausicaa, and of his admiration for her, that he has to express: she has no need to be afraid of him. And the spell works: Nausicaa recognizes his quality.

This cannot represent less than the highest courtesy of the poet's own day, when the allusions to far-off Delos, and other wanderings, were the highest credentials of a leader of men. The verbal picture of a rare and

<sup>89</sup> *Z.f. Gymnasialwesen* LXIV, Oct. 1940, 612-19.

beautiful object is a passport, as the brooch of Odysseus is a token of noble identity, until his scar and carpenter's skill at long last can convince Eurycleia and Penelope. This is all in the same order of thought and custom as the Minoan use of pictorial signets—the more exceptional, and especially the more beautiful, the better—for personal identification, as we see his sealstone on the wrist of the Cupbearer.<sup>100</sup> The poet's lavish but not indiscriminate use of similes is an inheritance from a society in which the simile was as normal an accessory to personal well-being as the seal-stone. The simile outlasted the signet and the seal cutters, as the battle-stories and descriptions outlasted the warriors and their splendid gear.

What began as a compliment and panegyric among the living, was transposed, as Chadwick suggested, first into commemorative court epic, such as Demodocus and Phemias recite, the heroes of which are not all yet dead, so that Odysseus recognizes his friends and himself in the tale: then into popular folk-chronicle, after the fall of two dynasties and the dispersal of the 'companions'.

#### *Independence of Structure and Content.*

It is perhaps necessary to note that this comparative study of art-themes is quite independent of their literary form, and that at this point emerges another aspect of Homeric art, namely the artistic composition of the poems themselves. It matters not whether a design comes down to us on a vase, or a sealstone, or a fresco. Nor does it matter whether we have it in epic hexameters, or in an ode of Pindar. This is obvious within the limits of Greek literature, but it is no less true for earlier periods, and pre-Hellenic language. Sir Arthur Evans rightly presumed that a culture with so vivid a pictorial art as the Minoan is not likely to have been without a literature; and that if so, whatever the date at which Greek superseded Minoan speech in the great Palaces, there must have been wholesale transfer of literary subjects from the one language to the other.<sup>101</sup>

More recently, and for a later period, M. Miriaux<sup>102</sup> has developed the thesis of Meillet<sup>103</sup> as to the origin and transmission of the hexameter, and regards the achievement of 'Homer' as having been the reformulation of traditional stories in this not very convenient metre, already in use for certain ritual occasions. Hymns of praise like our *Homeric Hymns* mark the transition from ceremonial to popular recitations, facilitated (as suggested above, pp. 245-6) by the commemorative ἐπίγραμμα of local or tribal heroes. While devoting himself mainly to this crucial phase, which he connects with the

<sup>100</sup> Bossert, 231.

<sup>101</sup> *JHS* XXXII, 277-97.

<sup>102</sup> E. Miriaux, *Les Poèmes homériques*, I, Paris 1948.

<sup>249.</sup>

<sup>103</sup> A. Meillet, *Origines indo-européennes des mètres grecs*.



explorations and colonial adventures of the eighth century, in the Pontus and the Western Seas, M. Miriaux has done something to make more acceptable this conception of transmission through a series of cultural phases, 'Aeolian', 'Achaean', and 'Minoan' before that, as suggested by Evans, and thereby to show how the lacuna between Minoan and Hellenic is to be filled. It was a further step, as M. Miriaux<sup>104</sup> has suggested, to recite such lays at formal commemorations of former chiefs now canonized as 'heroes'—a distinct order of beings, as Hesiod knew,<sup>105</sup> and Proteus in the *Odyssey* (IV, 563-9), between men and gods, and between men of the bronze age, and of the present age of iron. Of such hero-worship the ἀριστεία of the *Iliad* are a survival, like the κλέα ἀνδρῶν which are another part of the equipment of a Homeric hero (*Il.* IX, 189) and a gift of Calliope herself.<sup>106</sup> And rather earlier, what was the lyre-player accompanying, on the sarcophagus of Hagia Triadha, at a ceremony in the very presence of the deceased?

The evidence, that is, for continuity of literary tradition, across the centuries when the material arts were interrupted and neglected, is cumulative and, though fragmentary, sufficient; and in it the continuity of the miniature art of the sealstones and of the similes is significant.

### *The Formal Composition of the Homeric Poems.*

The vivid narratives, and close-knit sequence of events, especially in the *Odyssey*, have diverted attention from the formal elements in their construction. A modern reader, following the plot of a novel, looks to the end for the solution of problems, and within each phase of the action, to its specific outcome. In epic narrative, though events are in time-order, they are marshalled in order of thought, *before* a crucial decision, as its causes and circumstances, and *after* it as its consequences. The literary result is to replace a continuous narrative order or frieze-order by an analytical composition like that of a pediment, Aeginetan, Athenian, or Olympian, or a painting like the Marathon fight in the Painted Portico at Athens, and the Darius vase.<sup>107a</sup>

We know too little of large-scale Minoan art to risk generalizations, but the surviving examples are consistent with the view that it was predominantly—and perhaps essentially—frieze composition, for long wall-spaces, either repeating a series of shields or other similar objects, or passing from end to end in a continuous pageant, the elements of which are of equivalent value and significance: a procession of tributaries or votaries,

<sup>104</sup> *Op. cit.*, I, 334-47, 350. Cf. Ch. Autran, *Les origines sacerdotales de la poésie homérique.*

<sup>105</sup> *Opera* 154-73.

<sup>106</sup> Hesiod, *Th.* 79, 100.

<sup>107a</sup> *FR* II, pl. 68.

of charging bulls, swimming dolphins, partridges and other birds in their natural landscape.



FIG. 1.—GEOMETRIC DESIGN FROM A JUD IN THE BRITISH MUSEUM.

Ionian art, it is true, shares with its Anatolian neighbour, and with Assyria and Persia further afield, a tradition of frieze-composition, with which the long narrative sequences of Ionian epic are in general accord. What

c b) A b c ■ a b A b c E



FIG. 2.—VASE FROM KYNOSARGES.  
(BSA XII 85, fig. 6, top right.)

is characteristic of these poems, however, is that the narrative-frieze arrangement is not only interrupted by alternation of topics and localities—Ithaca, Olympia, and Sparta, Ithacan palace and countryside in the *Odyssey*, fighting and debate in the *Iliad*—but within these main sections they are composed with a subtle and often complicated balance and symmetry which,

once detected, adds greatly to the artistic value of the poem, while it is probably a main cause for its peculiar beauty and perfection.

This 'pattern', as it has been called, was first detected by Dr. J. T. Sheppard,<sup>107</sup> and further studied by the present writer;<sup>108</sup> it has now been further analysed for the *Odyssey*<sup>109</sup> with special reference to the arrangement of the speeches. It profoundly separates the literary background of both poems from anything Minoan, and relates it to the artistic background of the Geometric Art of the centuries from the tenth to the eighth (nos. 1-4), and of the great Hellenic schools both of art and of literature which derive from that period of culture: examples are the *stichomythia* of Attic tragedy<sup>110</sup> and the historical prose of Herodotus.<sup>111</sup>



FIG. 3.—GEOMETRIC VASE IN THE BRITISH MUSEUM.  
(Perrot and Chipiez VII, 169, fig. 52.)

This means that, as works of art, the Homeric epics have only remote relations to anything in the Minoan culture, however much or by whatever means their authors may have known in detail about Minoan works of art, the folk memory of Minoan society, or even the achievements of Late Minoan warfare and adventure.

Examples have been noted already of Minoan craftsmanship combined with Iron Age technique. In the picture of the Eastern Mediterranean it is difficult to separate the 'Sea Raiders' of the thirteenth century from the 'Ionians and Carians' of the seventh, Ramessid Thebes from Ethiopian. In the West, allusions to Sicily suit equally well the Minoan and the Corinthian contacts. But on the human, the heroic, and the divine levels, the

<sup>107</sup> *The Pattern of the Iliad* (1922).

<sup>108</sup> *JHS* LII, 264-96, esp. 268-90. Figs. 1-4 are reprinted here.

<sup>109</sup> *JHS*, in press.

<sup>110</sup> Myres, *ProcBritAc*, 1949, in press.

<sup>111</sup> Myres, *The Father of History*, in press.

positive evidence is that the epic outlook is Hellenic. 'Homer and Hesiod' fashioned the gods of the Greeks;<sup>112</sup> but they made them from Hellenic not from Minoan prototypes, so far as we can interpret archaeological evidence. Olympus, when it is anywhere on earth, is in Pieria (*Il.* XIV, 226; *Od.* V, 50), not in Crete. Here Zeus has his home; he is Idaean only in his special oversight over Troy (*Il.* VIII, 170, 410; XI, 183; XVI, 605 (temple)), Dodonaean only for Achilles (*Il.* XVI, 232-5). Though Athena has a temple in Troy (*Il.* VI, 88), she is at home in the 'strong house of Erechtheus' (*Od.* VII, 81), Apollo, too, overlooks Troy from Mount Ida (*Il.* XV, 237; XVI, 677), but he is at home in Delphi (*Od.* VIII, 80; XI, 581), with an altar in Delos (*Od.* VI, 162), not at Branchidae or Telmessus; Poseidon lives at Aegae (*Od.* V, 381), Aphrodite at Paphos (*Od.* VIII, 363), Hermes on Cyllene (*Od.* XXIV, 1). This pan-Hellenic view of the gods is in accord with the geographical range of the poems, and with the morals and customs of the people.



FIG. 4.—GEOMETRIC DESIGN FROM A JUG IN THE BRITISH MUSEUM.

Thus, side by side with the survival or rediscovery of masterpieces of Minoan craftsmanship, we are confronted again, on both sides of the Aegean, with conditions which made possible—and indeed inevitable—the transmission of saga and folk-memory through the Dark Age, and therewith of descriptive poetry, like the compliments of Odysseus to Nausicaa, literally *aere perennius*, and ready to the tongue of a great poet, when the favourable moment and receptive audience came.

Exactly what survived, by this or that mode of transmission, is a further question, not easy to answer, except here and there, without the aid of Minoan poetry as a starting point. All that has been attempted here is to survey all possible modes, and compare them, in the special field of 'Homeric Art' in which the archaeological evidence is most copious and most easily compared with the literary. If the conclusions here reached are in accord with the results of linguistic or literary or other kinds of analysis, so much the better. One example of what is possible is appended briefly here.

<sup>112</sup> *Hdt.* II, 53.



Further afield, English ten-syllable verse has a similar balance, with counterchanged stresses, about a *caesura* which varies in position, and may include two or more syllables in its central phrase:

u - u - u | - u - u -      (simple counterchange)  
 u - u - | u - | u - u -      (double *caesura* with centrepiece)  
 u - u - | u - u | - u -  
 u - u | - u - u | - u -

So too in other English metres likewise, e.g. 'Nuts in May':

- u - u - u - u - | (thrice)  
 | u - u - u - u - u

For the threefold repetition compare Greek sapphics.

Note that sometimes the initial and terminal phrases are nearly identical, sometimes counterchanged (iambic), sometimes reversed or partly so.

Similar constructions in early Indian verse support the inference that the Greek caesural metres are of Indo-European origin, and, if so, probably spread into Greek lands together with the Greek language: another argument for the proposed breach in immaterial culture at the close of the Minoan Age (see Appendix, pp. 259-60).

The resemblances between these lines with *caesura*-pause, and the balanced zone-patterns on Greek geometric vases are obvious, and these in turn are related to the incised geometric panel ornaments of the Late Bronze Age and Early Iron Age in Central Europe, and to the painted vase-decoration of Southern Italy in the same periods.

### Summary.

The following points seem to be established:—

1. The *Iliad* and the *Odyssey* preserve verbal descriptions of works of art of recognizable styles and techniques from various periods, between the end of the Middle Minoan and the earliest Hellenic, when fine Oriental metal-work was being traded from Cyprus or Phoenicia.

2. Such objects are mainly *either* from the Late Minoan period, and especially from the Cretan palaces (L.M.I), *or* from those Oriental imports, and imitations of them.

3. With the earlier references cohere the folk-memory of the Late Minoan 'Sea Raids' and the contemporary 'Achaean' feudalism in peninsular Greece in the thirteenth and early twelfth centuries.

4. With the later cohere the allusions to later raids like those of the 'Ionians and Carians' in Egypt in the seventh and later eighth centuries;

to Egypt under a Theban and Ethiopian dynasty; to Phoenicians trading westwards, a friendly regime in Cyprus, limited acquaintance with Pontus and the western Mediterranean, and a peculiar interest in the Hellespontine area, during and after the Aeolic colonization.

5. Similarly the social and archaeological background of the narratives combines memories of the feudal monarchies of the Late Minoan and Migration periods, with glimpses of the close hereditary aristocracies of the period from the Migrations to the Hellenic colonization period.

6. The profound social disturbances of the Migration Period disorganized the material arts—except those subservient to warfare, which developed rapidly and confusedly—without equivalent breach in folk-memory and folk-song, including reminiscences of palatial luxury.

7. In particular the Homeric use of naturalistic similes perpetuates the technique and repertory of Minoan sealstones, after these passed out of use.

8. Other souvenirs of Minoan art in the poems are supported by evidence for the rediscovery of objects from Minoan tombs, and by continuous traditions about Minoan sites such as Tiryns and Ithaca.

9. The hypothetical translation of Bronze Age literature from the Minoan language into Greek could only be confirmed by the decipherment of literary texts, or the identification, in Minoan documents, of personal names from Hellenic folk-memory.

10. Account must be taken of the re-introduction into Ionian cities of the 'Cyprian verses', an insulated provincial rendering of stories from the 'Sea Raid' period and the Achaean monarchies which persisted in Cyprus till Hellenic times.

11. But the language, metre, and structure of the poems cannot be shown to have any counterpart in the Minoan world. On the contrary, whereas Minoan pictorial art seems to have fundamentally a frieze-structure—though a few balanced and pedimental compositions are known—the composition of the poems, mainly narrative though they are, consists of a grouped series of subjects, themselves each constructed round a centrepiece with subsidiary episodes before and after. This structure is sustained and emphasized by the arrangement of the speeches. This principle of composition, whatever its origin, persists in Attic tragedy, and in Herodotus, and is fundamental in the painting and sculpture of peninsular Greece, whereas Ionian art retained an old frieze-tradition, of Oriental origin. On both sides of the Aegean, it determines the structure of hexameter, pentameter, the iambic senarius and the trochaic catalectic tetrameter. Their affinity with the Saturnian of pre-Hellenic Italy and other metres further north-west makes it probable that they are all of Indo-European origin.

12. Similarly the Italian and Danubian counterparts of Greek geometrical art, with balanced panels, supports this derivation of the art of the Early Iron Age in general in Greek lands, and helps to explain its resemblances with geometrical design in Anatolia, North Syria, and Cyprus during the period of 'Phrygian' predominance after the thirteenth century 'Land Raids'.<sup>113</sup>

13. This goes far to explain the incongruity between this structural balance and symmetry, and the employment, within its limits, of pictorial and naturalistic subjects, both as episodes in narrative poetry, as landscape accessories, and as enhancement by similes.

14. It must be remembered also that in popular poetry and folk-tale, though subjects remain traditional for long periods, each new reciter transposes them into his own idiom, combines them from his own repertory, and enhances them from his own experience and taste.

15. This spontaneity of the poets was, however, restricted by the introduction of alphabetic script and of more convenient material for extensive writing. It did not prevent the composition of new poems, but it prevented the oblivion of the older, which, as the ancient *Lives of Homer* describe, were inherited and transported like other works of art. It is probably no accident that one of the earliest alphabetic inscriptions is hexametric, on a geometric panel vase, and from Attica.<sup>114</sup>

J. L. MYRES

#### APPENDIX

##### I. *The Structure of Early Indian Verse.*

Cf. E. V. Arnold, *Vedic Metre* (Cambridge, 1905).

About two-thirds of the verses of the *Veda* are 'trimeters' of ten syllables, in alternate rhythm like the Greek iambic (*op. cit.*, §§ 42-5; 205). They have *caesura*, like Greek verses, after the fourth or the seventh syllable. They consist further of an 'opening' (syllables 1-4), a 'cadence' (8-10), and between these a 'break' (5-7) with one or rarely two pauses or 'rests' before or after the *caesura* (*op. cit.*, § 225), which is a natural pause corresponding to the taking of breath in recitation. There may be a slighter pause also after the eighth syllable. The rhythm of the 'opening' is that of two Greek spondees or iambs; that of the 'cadence' and the 'break' more varied. Both the first and the last syllable may be slighted or there may be an additional syllable at the end of the 'cadence' (*op. cit.* § 224). When the

<sup>113</sup> For Anatolia, see Bousset, *Alt-Anatolien* (1942), 514, no. 390; Kirchner, *Imagines Inscr. Attic.*<sup>1</sup> (1948), 1066-1078, pl. I, 1.

<sup>114</sup> Gardner-Roberts, *Manual of Greek Inscriptions* I,



opening is ■ 'pentad' of five syllables, the rhythm is very nearly Saturnian; more exactly so when there is a rest before the sixth syllable (*op. cit.*, §§ 227-8). Probably the pre-Vedic trimeter was  $\underline{\underline{\underline{\underline{\underline{\underline{\quad}}}}}} || \underline{\underline{\underline{\underline{\underline{\underline{\quad}}}}} - - | - \underline{\underline{\underline{\underline{\underline{\underline{\quad}}}}} - -$ ; *caesura* being prior to differentiation of quantity (*op. cit.*, § 237). There is no trace of equivalence as in Greek between one long and two short syllables.

## II. St. Augustine on Metrical Symmetry.

This aspect of quantitative metres as a balance of initial and terminal phrases was partly appreciated by St. Augustine in his *de Musica*, Book V.<sup>115</sup> 'A metre will be better and more enjoyable if it is divisible into two mutually concordant parts' (i, 2). 'There must be some symmetry (*concininitas*) between the two parts, for otherwise there would be no verse at all' (iii, 4; xiii, 24). But they 'must not be interchangeable'. And there must be 'a certain difference at the end of each verse' (iv, 5); 'a verse must have a fixed end'. This further modifies symmetry, by shortening the latter part: 'the shortening is at the end, where it should be' (iv, 7). The heroic 'hexameter' should be scanned by anapaests with an initial and a final syllable (v, 10); 'iambic' lines, similarly treated, consist of trochaics (i, 11). He does not further discuss *caesura* or its variations, nor the group of syllables between alternative *caesura*, except when he says that a six-foot line may be 'divided' into two equal parts each of three trines (x, 26), but without examples. Of Italic metres he only says that 'the old Latin poets freely mixed feet, and failed to preserve any fixed interval between feet inappropriate to the verse' (xi, 24). This he regards as 'indiscipline'; clearly he had not fully analysed the lines.

<sup>115</sup> I quote Jackson Knight's paraphrase, London, 1949.

## LACONIA

(PLATES 26-29)

### KALÝVIA SOKHÁS.<sup>1</sup>

The village of Kalývia Sokhás lies against the base of one of the massive foothills in which Taygetus falls to the plain three or four miles to the south of Sparta (PLATE 26, 1). It is bounded by two rivers which flow down in deep clefts from the mountain shelf. The hillside above rises steeply to a summit which is girt with cliffs on all but the west side and cannot be much less than four thousand feet above sea level; this von Prott believed to be the peak of Taleton.<sup>2</sup> Its summit is crowned by the ruins of a mediaeval castle which was undoubtedly built as a stronghold to overlook the Spartan plain; the only dateable object found there, a sherd of elaborate incised ware, indicates occupation at the time when the Byzantines were in possession of Mystra.<sup>3</sup> The location of the other sites mentioned by Pausanias in this region remains obscure, but fortunately that of the Spartan Eleusinion has not been in doubt since von Prott discovered a cache of inscriptions at the ruined church of H. Sophia in the village of Kalývia Sokhás.<sup>4</sup> In 1910 Dawkins dug trenches at the foot of the slope immediately above the village and recovered a fragment of a stele relating to the cult of the goddesses and pieces of inscribed tiles from the sanctuary.<sup>5</sup> The abundance of water in the southern ravine led von Prott to conclude that the old town of Bryseai with its cult of Dionysus also lay at Kalývia Sokhás; but no traces of urban settlement have come to light at the village, and the name rather suggests copious springs such as issue from the mountain foot at Kefalári a mile to the north where ancient blocks are to be seen in the fields.

The published inscriptions of the Eleusinion can be found in *IG* V. i. They are fairly numerous, since there can be little doubt that Kolbe's directions to the Eleusinion, Bryseai, the temples of Apollo, Minerva and Onga at Slavokhóri, the six intelligible renderings of the modern name Kalývia Sokhás and the barbarous locative 'Kalyviae' are in fact all to be referred to the same village. The following inscriptions can therefore be assigned with

<sup>1</sup> Besides the usual abbreviations employed in *BSA* the following should be noted:

*AO*: R. M. Dawkins and others, *Artemis Orthia*, *JHS* Suppl. Vol. 5 (1929).

*SMC*: A. J. B. Wace and M. N. Tod, *A Catalogue of the Sparta Museum* (1906).

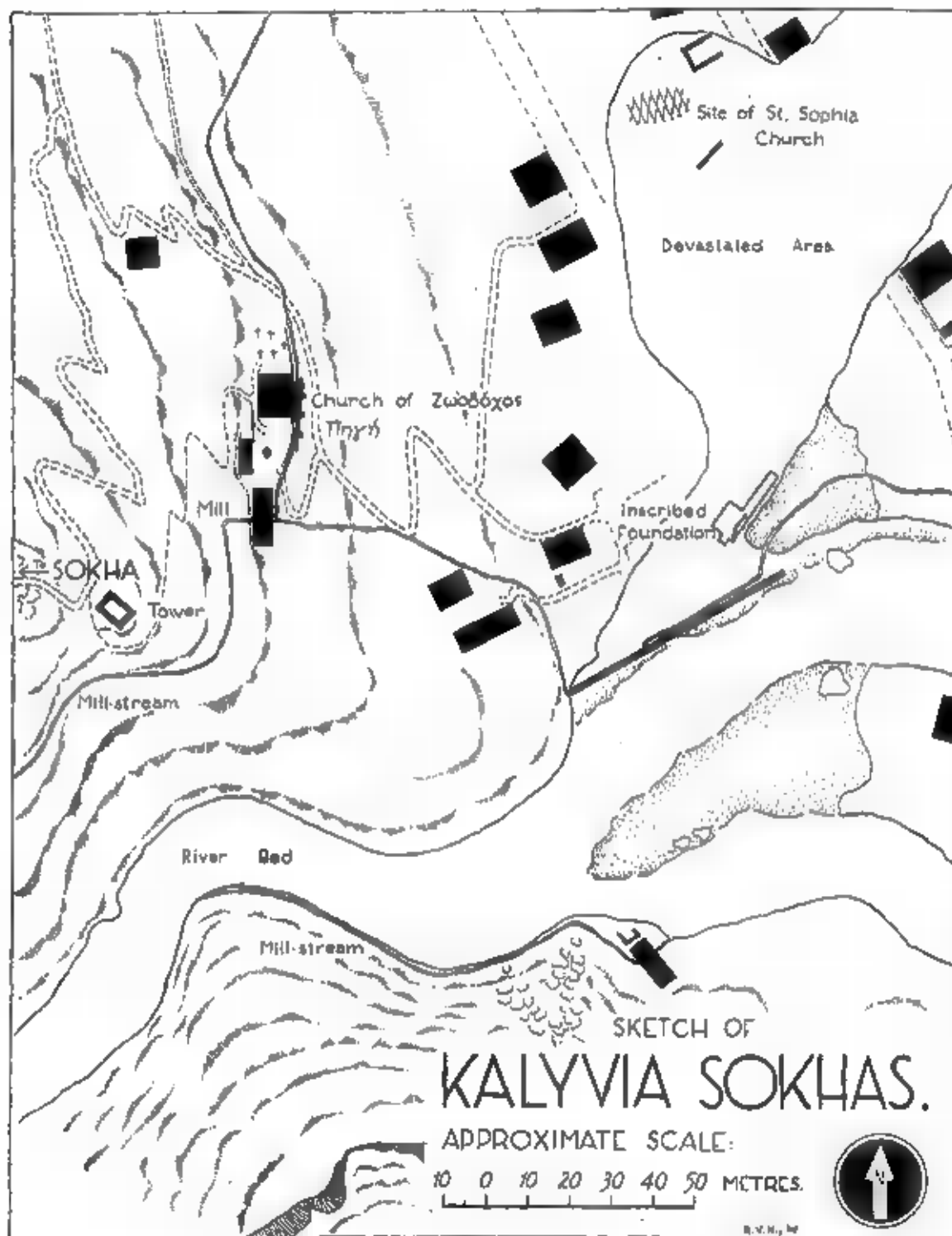
*SGDI*: Collitz-Bechtel, *Sammlung griechischer Dialekt-Inschriften*.

<sup>2</sup> *AM* XXIX, 7 ff.

<sup>3</sup> This castle has been briefly described by Ormerod *BSA* XVI 84 f.; like him I noticed no sign of the ancient remains remarked by von Prott, but note that the bluish marble has been quarried in surface workings, with which slight wall traces of indeterminate date are connected, on the east slope below the castle.

<sup>4</sup> The location was not accepted by M. Fränkel, and apparently only spasmodically by Kolbe in *IG* V. i.

<sup>5</sup> *BSA* XVI 12 ff.



certainly to Kalývia Sokhás: *IG* V. i 81, 229, 519, 567, 579, 581-584, 592, 595, 596, 604-608, 617, 623, 631, 1511; \* with the possible exception of no. 81 they are all inscriptions set up at the sanctuary. *IG* V. i 594 is probably from the Eleusinion, and perhaps also 230, 248-9, 590, 598 and 1343, while 364 relates to the cult of the Eleusiniai. The villagers also report the previous discovery of an inscription saying 'Ἡ πόλις σωφροσύνης ἔπεσεν, which may be unpublished since no closely corresponding phrase such as σωφροσύνης ἔπεσεν occurs on a known inscription of Kalývia Sokhás. Unfortunately a careful examination of the published inscriptions of the Eleusinion has not been possible since the Sparta Museum is closed and the stones which had remained by the church of H. Sophia were buried by a flood in or about the year 1939.

The ground near the mouth of the ravine at the south end of the village has been inundated by a number of floods, but probably none has so disfigured the landscape as that in October 1947, whose violence is attributed to the recent burning of forests on the high mountain slopes (PLATE 26, 2). The river then broke its left bank at the mouth of the gorge, and a torrent swept through the village, washing away thirty houses and scores of trees on its way to join the other stream, which flanks the village on the north. Just below the point where it broke out the torrent gouged out a new bed about ten metres wide to a depth of three metres and more, exposing a row of foundation blocks in either bank and opening up an extensive deposit of miniature clay vases. Heavy marble blocks and stelai were dislodged from the bed and carried as much as a thousand yards downstream, while miniature vases and other light debris were washed across the main Sparta-Gytheion road to the Eurotas. Some days later another flood overlaid the torrent zone with boulders and shingle, but not before the villagers had retrieved a large number of objects from the excavation. After the site had been visited by a student of the British School, Mr. W. H. Plommer, a permit was obtained from the Ministry of Education, and the task of putting the site in order was executed in November 1949.<sup>7</sup>

A single trench was dug in 1949 at the spot by the right bank of the 1947 torrent bed where the villagers reported having seen a line of inscribed marble blocks. It was extended for a length of 20 metres in a north-southerly direction and carried down through clean dark shingle and stones until the

\* 229: for the reading see *JHS* XXXIV 62, and below page 266 note 13. 519 should be in honour of a woman, if not to be combined with 582 (as Woodward *BSA* XLIII 253). 567: in honour of a woman. 584: for corrections see below page 278. 604: corrections page 278. 607: corrections *BSA* XLIII 254 f. 608: correction *BSA* XXVI 111; for the restoration see page 279 note 41. The inscribed tile fragments are embodied in no. 1515; *b* and *i* from Magoúla are falsely assigned to the Eleusinion (see *BSA* XVI 3),

*c* speaks for itself; on *a* for [Ἀγο]ρίων read [Ἀγο]ρίων (or [Ἀγο]ρίων, Nilsson, *Geschichte griech. Religion* I, 434 n. 2).

<sup>7</sup> In March 1948 Mr. V. R. d'A. Desborough inspected the site and removed many objects to the Sparta Museum, but was not permitted to remain on the spot on account of rebel attacks (cf. the interim account *JHS* LXVII 39 f.). The sketch-plan on p. 262 has been drawn by Mr. R. V. Nicholls.

line of blocks was found at a depth of 2.80 metres from the bank. After the removal of a number of heavy boulders seven marble blocks of different dimensions<sup>2</sup> were exposed, laid on a rough foundation consisting of hardly more than one course of unworked stones about thirty centimetres high which rests on virgin soil. On the north (at the left edge in fig. 1) the end of the line has been swept away by the torrent, while at the south end it continues into



FIG. 1.—KALÝVIA SOKHÁS: BLOCKS OF KERR.

the bank. The four northerly blocks form an almost straight line 2.84 metres long pointing at 206° True North, while the southerly stretch is a straight line leading off at an angle of 20° (186° TN). The blocks are of the local blue-tinged marble, level and fairly well worked off on top and on the outer face. Each of the two sides bears an inscription on the riser. The northerly one extends for a distance of 141 cms. on the first three blocks, in letters 4.6 to 6.8 cms. high with about 5 cms. free space on the riser above the

<sup>2</sup> Length from 61 cms. to 103 not out, height on the riser 14 to 36, width front to back 30 to 36.

letter tops; it reads KYMBAΔEΙATAIΔAMATPI. The other inscription is 96 cms. long and cut on the seventh block; it is in smaller letters 3.5 to 5.8 cms. high with 3.5 cms. free space above, and reads KYMBAΔEΙATAIKOPAI. Both



show the same peculiarities of letter forms and were undoubtedly cut by one mason. The middle points of the two inscriptions are equidistant from the angle where the two sides meet, as though each were carefully centred on a side of five blocks 3.75 metres long. The blocks have no visible cuttings and are smoothed by wear on the tread; they therefore form a kerb rather than a foundation.

The 1947 torrent swept along the line of blocks, which it left high and dry in the edge of the bank before filling the bed with fresh shingle. But the north end of the kerb escaped the force of the torrent, and here brown earthy gravel was found above and alongside the kerb; it contained a mixed collection of miniature vases together with a few fragments of tile, terracotta figurines and little lead wreaths. Below the level of the kerbstones the gravel was less pronounced, and the earth here contained a dense packing of miniature hydriai above the virgin soil; these may have been brought in at the time that the kerb was laid, whereas the wider assortment of miniatures in the gravel above was washed up later by a flood which covered the kerb over. Owing to the action of floods no trace of pavement or flooring is left on either side of the kerb.

The message carried by the two inscriptions can hardly be complete. An offering by an unknown community or *thiasos* cannot be ruled out. But we know that it was not unusual, in the days before the honorific statue established itself at the Eleusinion, for women to dedicate small monumental constructions to the goddesses on the conclusion of their term of office; if this kerb was another such, like those of Etymokledeia (page 266) and Klesinika,<sup>9</sup> the inscription will have continued on two more sides and given the parentage of Kymbadeia and the occasion of the dedication.<sup>10</sup> The forms of the letters are well matched in Spartan inscriptions of about the third century B.C.<sup>11</sup>

<sup>9</sup> *IG* V. i 229.

<sup>10</sup> For Kymbadeia cf. the Arcadian man's name Κῡμβος, Pape-Benseler, *Wörterbuch*, s. v.

<sup>11</sup> Cf. *IG* V. i pl. 3, where no. 458 is securely dated. The looped *beta* is rare in Sparta; I have not noted an earlier example than that of BSA XXX 217 no. 7,

which Woodward considers perhaps first century A.C., but Woodward points out to me that *IG* V. i pl. 3 no. 649 (dated to the third century A.C. by Kolbe) seems to show the loops of the *beta* just separated. Cf. also the Attic victor list of 168/4 A.C., *IG* II. ii 968 = *IG* II<sup>3</sup>, 2316.

A number of architectural pieces were left stranded in the torrent zone. The block bearing Etymokledeia's dedication, now in two pieces, is in the Sparta Museum<sup>13</sup> (PLATE 26, 3). It is of local marble, as are all the architectural fragments on the spot, and closely tooled on the front and the ends; at the back (where it is badly damaged) and on the bottom it is left rough, while on the tread it has been heavily worn down. It is 129 cms. long, 17 cms. high and 26 cms. from front to back, with a cramp socket at either end.

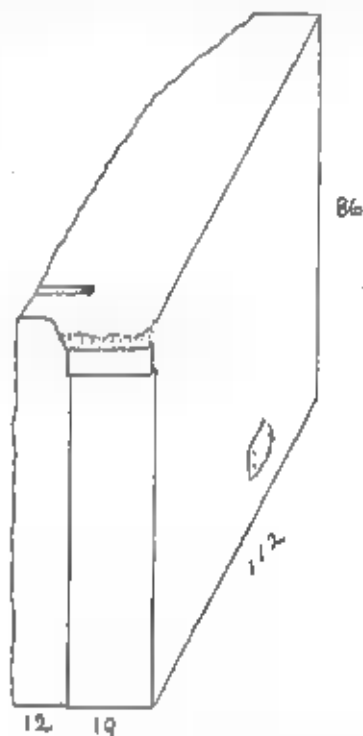


FIG. 2.—KALÉVIA SOKHÁS: DORIC ANTA BLOCK.

It must be the step of a base or a threshold.<sup>13</sup> The inscription is in letters 3.2 cms. high:

Ἐτυμοκ(λ)ηίδεια κόρη [κ]αὶ Δάμοτρι ἀνέστηκε  
Ἀνδρотеλας συγάτηρ τετάρτη ἀπι-  
θαλιτευκία,

i.e. Etymokle(si)deia,<sup>14</sup> the fourth daughter of Androtelia to have dis-

<sup>13</sup> The right-hand piece, which was recovered in 1948, is mentioned *JHS* LXVII 39.

<sup>14</sup> *IG* V. i 229 seems to be another such kerbstone dedicated by a retiring *thoinarmyria*. There is no reason to doubt Fränkel's reading or the completeness of the inscription; read Κληίκα and οὐνοαρροστρίδα. Bourguet, *Dialecte laconien* 118, considers the mother's

name to have been Mylaso.

<sup>15</sup> Mr. Woodward has called my attention to what looks like a *lambda* cut above the point of omission in the dedicator's name. For the long form, which I have restored after some hesitation, cf. *IG* V. i 591, where Dodwell noted a *sigma* in the ninth place in the name before the letter was chipped off.

charged the amphithalitic office. Lettering of middle or late Hellenistic times.<sup>15</sup>

The Doric *anta* block FIG. 2 is finely tooled at both ends and on the right side, though the lifting boss has not been properly worked off; the left side is left rough-hewn except for the first 20 cms. where another block fitted against it, and has been hacked away on a slanting line to a depth of about 30 cms. at the rear end; the moulding on the front has been broken away except for the lower part of the *cyma* above the plain fillet. The block is in the 1947 torrent zone about 250 metres downstream from the Kymbadeia kerb. Since it was intended to be seen from both front and back it has no place as an *anta*



FIG. 3.—KALÝVIA SOKHÁS: MARBLE  
CHAIR WITH LEGS IN RELIEF.

of a massive building; it may perhaps have been the upper block of the jamb of an open porch, or (as Mr. Travlos has suggested to me) the right end of an altar. The other architectural pieces do not suggest the presence of a large building; only two squared blocks were washed up by the torrent, of which one, 93 cms. by 50 by 26 high, seems from the position of the cramp and dowel sockets to come from a base, while the other, 72 cms. by 32 on the visible surface, has disappeared since 1947. An *abacus* or plinth, 47 cms. square and 9 cms. high, with the invocation EY carved in letters like those on the Kymbadeia kerb, has been brought in to the Sparta Museum. Finally, a drum of a Doric column lies on the right side of the torrent zone near the *anta* block; it is 91.5 cms. high, with a diameter of 37 cms. at the top and 38.5 cms.

<sup>15</sup> For lunate sigma on Attic stone inscriptions from early Hellenistic times cf. Larfeld, *Handbuch, Attische Inschriften* 469 ff.



at the bottom; the drum has sixteen flutes, and the radii scored on the end to mark the position of the arrises are still visible.<sup>16</sup>

Five solid marble seats, or *kathedrai*, were washed out by the 1947 torrent; four have been removed to the village school and the Katsarou crossways at Braiméiko, while the fifth remains in the river bed a kilometre downstream. In all cases the chair back has been broken off. Apart from the one FIG. 3, the seats have plain sides and quarry-face surface on the bottom and backside,

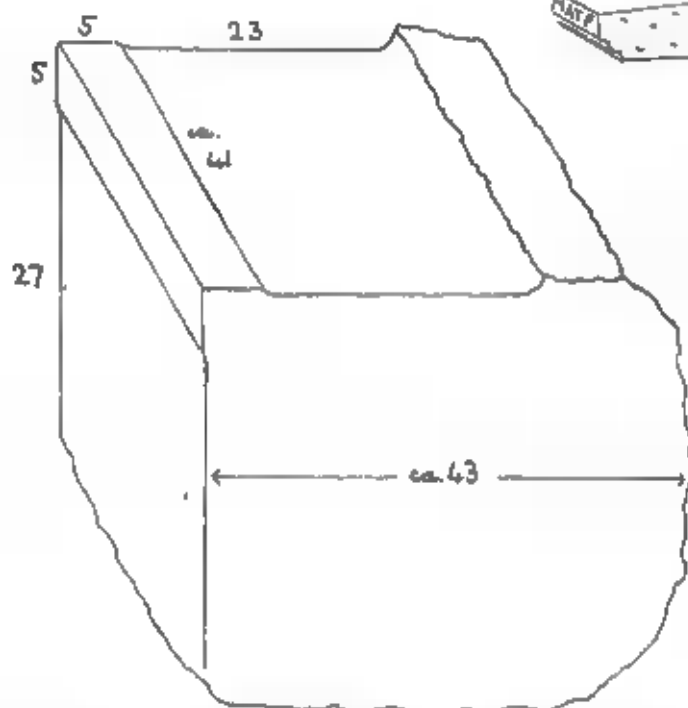


FIG. 4.—KALÝVIA SOKHÁS: FRAGMENT OF CARVED CHAIR OF SIMPLER TYPE.

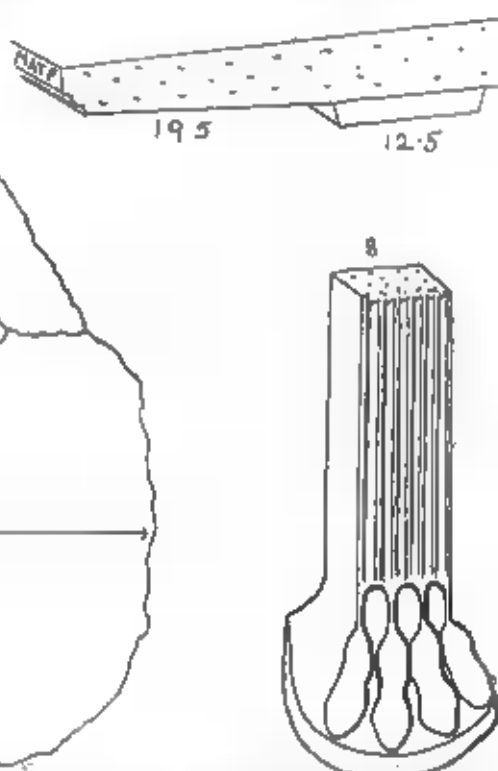


FIG. 5.—KALÝVIA SOKHÁS: TABLE-TOP AND TABLE-LEG OF MARBLE.

which indicates that they were bedded in the ground and backed against a wall or bank; they are bruised and badly worn, but seem with one exception<sup>17</sup> to be consistent in type and measurements (FIG. 4). All surfaces intended to be seen are carefully tooled. The chair, FIG. 3, is singled out from the rest by legs carved in flat relief on the ends of the block; it is worked off under-

<sup>16</sup> A capital of a slightly smaller Doric column, 40.5 cms. square on the *abacus* with twenty flutes, supports the balcony of a house on the east side of the torrent zone; it appears to have been found before the 1947 flood, and its place of origin is therefore uncertain.

<sup>17</sup> The seat in the river bed is half as broad again (c. 63 cms.), and has a low raised fillet at the sides of the seat; it must have been intended as a double seat without much allowance for adult expansion.

neath, is higher (c. 42 cms. on the front) and broader (47 cms. from side to side), and has a shaped backside as though intended to appear free-standing; but it has the same ledge at the front, and the same sitting space from the front edge to the springing of the chair back, so that it must be one of the same series, probably occupying the position of honour. The seat of the chair is distinctly tilted back from the front.

A piece of a table top of local marble was picked up in the torrent bed and is now in the Sparta Museum (FIG. 5); it is in one piece with the stretcher over the legs, and retains a few inches of the moulded edge of one of the short



FIG. 6.—KALÝVIA SOKHÁS: BRONZE JUG AND RIGHT HAND OF BRONZE STATUE.

sides with a carved dedication ΔΔ]υατ[1. In addition, two legs, with lion-paw feet and six cabled flutes on the front of the leg, are preserved in houses in the village as souvenirs of the flood (FIG. 5), while the same fluting is found above the heel on a simpler club-foot now in the Sparta Museum. They may be the legs of a single table, the front ones only ending in lion's paws. They were probably not intended to stand on a pavement but to be bedded in the ground. The back leg has the single figure Δ or A inscribed on the shin.

A complete unfluted marble pedestal of the type that commonly supported shallow basins, and a fragment from a smaller fluted pedestal were retrieved by villagers and lodged at the school.<sup>18</sup>

<sup>18</sup> Diameter at the foot 47 cms., height 58 cms., with a cutting 8 cms. square in the top; the fluted fragment had a diameter of 38 cms. at the foot. For the type cf. Furtwängler *Aegina* II, pl. 66.

The dedications washed out by the torrent in front of the Kymbadeia kerb include the right hand of a bronze statue about three quarters of adult size (FIG. 6); the fingers are slender, and the skin is smooth like that of a child or young woman. The hand and a fragment of bronze drapery from the region below the waist may belong to the statue which stood on the base set up in honour of Agesippia by her great-grandmother (page 277). A headless



FIG. 7.—KALÝVIA SOKHÁS: STATUETTE  
OF WHITE MARBLE.

statuette of fine white marble 41 cms. high was found at the same spot (FIG. 7); the neck is drilled for the attachment of the head, and the right elbow is missing (the broken surface being broached as though for a patch). The figure is draped in a high-girdled sleeveless chiton, with the himation held on the left hip and wound clockwise round the body and over the left shoulder where its end is grasped in the right hand. The execution is good though the surface is water-worn.

Three joining fragments of a fifth- or fourth-century stele with twin conical-lidded amphorae in relief were brought to the Sparta Museum after the 1947 flood, but the exact place of discovery has not been ascertained; the stele is illustrated in *JHS* LXVII 40 fig. 4. The width and the preserved height on the right edge are both 51 cms. Above the lids a plain fillet runs across the face of the stone; there is no trace of relief in the preserved corner above the fillet. The majority of stelai of this class are shown by attributes and inscriptions to have been dedicated to the Dioskouroi,<sup>19</sup> and the capped amphorae seem to have passed as a symbol of the twins; the dedication of this stele at the Eleusinion shows how close was the connection between the Dioskouroi, who were born under the peaks of Taygetus<sup>20</sup> and the pair of goddesses who were worshipped below.

Two fragmentary bronze vessels were found; one is a shallow round-bottomed patera, the other a jug 11.5 cms. wide at the rim (fig. 6).<sup>21</sup> A strip of bronze with parts of three straight edges preserved was picked up nearly two kilometres downstream (fig. 8). The two sets of six stud-holes show that it was nailed on wood, and traces of bright blue paint are still to be seen on the back of the bronze; it may have come from a chest, or more probably (as Mr. Travlos has pointed out to me) from the plating of a door.<sup>22</sup> Horizontal coppery streaks show that a transverse strip was nailed across at the level of the lower set of stud-holes. Five rows of names were punched on the bronze; they extended onto the next strip, which the buckling at the edge shows to have overlapped by something over a centimetre. Since lines 1, 2 and 5 give proper names, Ναρμ[ήνιος] may be restored in line 4;<sup>23</sup> and Βαγος may be an appropriation of the Laconian word Βαγός (i.e. Φαγός).<sup>24</sup> My restoration of the *alphas* with an unsymmetrically broken bar is conjectural; the letter forms may date from the fourth century B.C. on.

Eight sets of cast lead wreaths with closely arrayed spikes were found, two or three wreaths generally adhering to one bar;<sup>25</sup> they vary in diameter from 1.5 to 2.5 cms. Wace has shown that these spike-wreaths, which made their appearance before the end of the seventh century at Orthia, continued to be dedicated until early Hellenistic times when almost all other types of lead figurines had been exhausted.<sup>26</sup> Dawkins also reported the discovery of lead

<sup>19</sup> Cf. Wace, *SMC* 113 ff.

<sup>20</sup> Homer, *Hymni Diosk.* Cf. also the statement of Kallias the dadouch that Herakles and the Dioskouroi were the first people to be shown the mysteries of Demeter and Kore, Xen. *Hell.* VI, iii, 6; Plut., *Thes.* 33, etc. Cf. also the association of the *pythas* festival in the Messenian mysteries (*IG* V. i 1390; for the identification with the Dioskouroi, Kern in *RE* X, 2, 1419).

<sup>21</sup> Dawkins in 1910 found the legs, up to the knees, of a small bronze figure of a youth standing upon a small

coiled up animal, and four bronze bracelets ending in snakes' heads (*BSA* XVI 14).

<sup>22</sup> Cf. Macedonian tombs, e.g. Heuzey-Daumet, *Mission archéologique de Macédoine*, pl. 21.

<sup>23</sup> Neumenios occurs as a magistrate's name on early third-century coins of Taras.

<sup>24</sup> Restored in Hensychnius s.v. Βαγος.

<sup>25</sup> Cf. *AO* pl. 193, 11.

<sup>26</sup> *AO* 281 f.

wreaths in his trenches,<sup>27</sup> and the total absence of other lead figurine types indicates that the wreaths from the Eleusinion are of late date. A gold bead was also recovered but has not been available for study.



FIG. 8.—KALÝVIA SOKHÁS: INSCRIBED BRONZE STRIP.

A selection of the clay vases found is shown in PLATE 27. The vases are all of Laconian manufacture. One flat-bottomed black aryballos of a type frequently associated with the miniature vases was found by the Kymbadeia kerb (PLATE 27, 8); otherwise this type does not seem to occur at the Eleusinion. The hydria PLATE 27, 1, which is 18.5 cms. high and covered with a fine, rather metallic black glaze, is an unusually good specimen of Laconian later black glaze ware; it probably dates around the middle of the fourth century.<sup>28</sup> The other hydria, PLATE 27, 2, is distinguished from the miniatures in size but not in its fabric. The body of a squat lekythos of a fourth-century type with perfunctory ribbing on the belly was found in the torrent bed; a dealer's mark is scratched under the foot (FIG. 9, a).

<sup>27</sup> *BSA* XVI 12.

<sup>28</sup> For the shape of the body cf., for instance, *CVA*

*British Museum* III, pl. 98, 5 of the second quarter of the fourth century.

The rest of the vases are miniatures. They are of a soft reddish ware which contains a little mica, wheel-made except for a few of the smallest pieces, and almost invariably flat on the base. The majority were originally decorated with a thin darkish brown or off-black glaze, often fugitive enough to be rubbed off by the thumb, but the curious three-handled pedestal vases and some of the drinking cups seem to have been left plain. The commonest forms are the *hydriks* and the *lakaina*. The latter had a long history in Laconia and was especially popular as a miniature; of the four thousand odd whole miniature vases found at the Megalopolis road sanctuary, about seven hundred were *lakainai*.<sup>29</sup> The extremes of elegance and stolidity are illustrated in PLATE 27, 7 and 13; one had groups of letters scratched on the bottom and

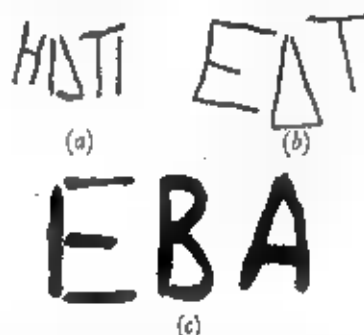


FIG. 9.—KALÝVIA SOKHÁS: (a) DEALER'S MARK ON FOURTH-CENTURY SQUAT LEKYTHOS; (b) (c) GROUPS OF LETTERS SCRATCHED ON BOTTOM AND SIDE OF LAKAINA.

the lower wall (FIG. 9, b and c). *Lakainai* were not found in the lower deposit at the Kymbadeia kerb where *hydriks* dominated, but two or three fragments of stemmed goblets with flaring wall and side-handles (PLATE 27, 9) came to light there. The *hydriks* (PLATE 27, 4 and 10) are ungainly vases with too much handle and lip and often a sagging belly whose underside was left unglazed; their prototype (e.g. PLATE 27, 1) can hardly be much earlier than Hellenistic, and it is therefore significant that this shape is not illustrated or mentioned among the miniatures from the Megalopolis road, Angelona or the Orthia sanctuary and is only inadequately matched at the Amyklaion.<sup>30</sup> The conical lids (PLATE 27, 6) should belong to the *hydriks*. Glazed two-handled (and less frequently one-handled) skyphoi (PLATE 27, 11 and 17) are common throughout, as also at the other sites, with the exception of the Amyklaion. Baby kraters (PLATE 27, 6), plain handleless pail-shaped cups or

<sup>29</sup> BSA XIII 172 fig. 2c. The note-books of the 1907 campaign show that in BSA XIII 129 n. 2 (repeated AO 106) the figures for *lakainai* and two-handled skyphoi have been accidentally exchanged; there were about two thousand skyphoi, and eight

hundred aryballoi.

<sup>30</sup> Angelona, BSA XI 83 ff.; Orthia, AO 106 ff.; Amyklaion, AM LII 59, where the hydria normally have three upright handles (*ibid.* pl. 15, 32—a form comparatively rare at the Eleusinion).

*kalathoi* (14), and two forms equipped with handles or lugs at three cardinal points—pedestal dishes (19) and flasks with an orifice only big enough to take a single drop of liquid (3 and 5)—complete the range of current types at the Eleusinion; they can be matched at the Amyklaion, and in some degree at the Megalopolis road and Orthia sites.

As von Massow has remarked,<sup>31</sup> these miniatures had ■ long life. They began in the Orientalizing era, and are said to have been already



FIG. 10.—KALÝVIA SOKHÁS: TERRACOTTA FIGURINES FROM TORRENT BED.

dwindling at Orthia in the sixth century; while in the soundings made in 1949 by the acropolis of Sparta (page 282) miniature lids (like PLATE 27, 6), ■ pail-shaped handleless cup and specimens of the types *AM* LII pl. 15, 32 and 34 were found in fourth-century contexts (PLATE 29, 15–16). The *lakaina* and skyphos were original forms<sup>32</sup> and seem to have persisted for some centuries, though the *lakaina* may have faded out before the Kymbadeia kerb

■ *AM* LII 58.

■ Cf. *BSA* XIII 128 f.

was laid down. The *hydrie* on the other hand seems to have been introduced late. The long-stemmed forms AO 107 fig. 82 k and l, which attained popularity in the sixth century, seem to have been superseded by the pedestal and single-drop vases of the Amyklaion and Eleusinion; <sup>33</sup> von Massow has surmised that the single-drop flasks were a lateish development. The archaic usage of applying white and red paint on the black glaze is not found on the miniatures from the Eleusinion; and in general, though most of the forms can be matched at the Amyklaion where the layer containing these vases extends from Orientalizing to late classical times, the miniatures from the torrent bed at the Eleusinion present a more consistently late appearance than any of the other groups. They should be mainly of the fourth and early third centuries, though odd earlier pieces may have strayed in.

Ten fragmentary terracotta figurines have been recovered from the torrent bed, of which two are simple bodies of horses or oxen; the remainder are of draped female figures, the heads being flattened on top as though in indication of a *stephane*. With one exception (FIG. 10, 3), which is backed and seems to be Corinthian, late (or sub-)archaic, they are of the same ware as the miniature vases and generally hollowed out at the back. The bust FIG. 10, 1 should represent one of the two goddesses; <sup>34</sup> like the head shown alongside it must be of post-Praxitelean date. FIG. 10, 4 is of the fifth or fourth century. No seated female figurines were found, such as were noted by Dawkins in his trenches further to the north-west.<sup>35</sup>

Four further inscriptions on marble were washed out by the 1947 flood.

Marble pedimental roof-piece, now at the Katsarou crossways; no cuttings on the underside. Breadth 58 cms., front to back 42 cms. The inscription runs the full width of the horizontal cornice on the front; it is badly water-worn and perished at both ends. Height of letters 1.4 cms.

[<sup>3</sup> αἰα.] ἄνδρα Πέρφαντος συγάτηρ Ἐλευθιν[<sup>3·3</sup> αἰα.] (οἱ αἰς)].

The letter-form  $\Gamma$  implies a date not much later than the third century B.C. Perphas is contracted from Periphas.<sup>34</sup> The form  $\epsilon\lambda\epsilon\upsilon\theta\eta\nu\omicron\varsigma$  should probably be restored in *IG V. i* 364, line 6, where also the fifth letter is a round one in Fourmont's copy; the second *upsilon* is also preserved in the

\* In JHS LXVII 40 I overestimated the resemblance between these forms and that of *AO* fig. 89 k.

<sup>24</sup> Cf. Farnell *Culte of the Greek States* III, 227.

31 *ISA* XVI 14.

■ The index of IG V. i shows three examples of  $\Pi\epsilon\iota\varsigma(1)$ -names; Woodward also suggests that  $[\Pi]\epsilon\gamma\mu\delta\alpha\varsigma$  should be restored on the Verona Dioskouri relief SMC 113 fig. 14.



form 'Ελευθύνια (*IG* V. i 213) and the Cretan month 'Ελευσύνιος (*SGDI* III ii no. 5149. 8).

Marble stele with moulding round the foot; two dowel-holes in the bottom and two in the top; now at the village school. Height 78 cms.; breadth 59; thickness 24. Letter and space down 3.5 cms. *JHS* LXVII 39. FIG. 11 a.

Δαμοκλῆς Ἀρ[ιστοκράτης?]  
[Γ]οργώι Ἀριστό[λα]  
τὰν γυναῖκα ἀμπ[ισαλιτεύ-]  
δὲν ἔτη δέκα  
Δάματρι καὶ Κόραι.

The unadorned letter forms would fit a date in the first century B.C. There is now no trace of the *lambda* noted at the end of line 2 by Plommer in 1947. Damokles, son of Aristokrates, was Tainarios in the year of Kallikrates (according to Woodward between 20 B.C. and A.D. 10), when also Aristolas was Paianias (*IG* V. i 210). Final *iota* in the accusative of -ω stems has not been noted in Laconian inscriptions up to date; its appearance here may be due to the demotic character of the dedications at the Eleusinion. For other Doric -oi stems, cf. Meister in *SGDI* III ii no. 4649 and Bechtel *Griech. Dialekte* ii 42 (Messenia), Payne *Necrocorinthia* 165 ff., nos. 33, 48, 50, 59, 65, 66, 71 (on sixth-century Corinthian vases).



(a)



(b)

FIG. 11.—KALÝVIA SOKHÁS: (a) INSCRIPTION ON MARBLE STELE. (b) INSCRIPTION ON MARBLE BASE.

Blue marble statue-base with moulding at top and bottom; dowel-holes in the top for plinth and in the bottom; in 1947 torrent bed 230 metres downstream from Kymbadeia kerb. Height 66 cms.; breadth 60; thickness 58. Letter and space down 3.5 cms. *JHS* LXVII 39. FIG. 11 b.

[?Νι]χιπία Κλεονίκου  
 [Ἀ]γηίππια Ἰππάρχου  
 τάν τοῦ θυγατρίδους  
 θυγάτερα ἀνφιθαλει-  
 τεύσαν ἔτη ὀκτώ Δά-  
 ματρι καὶ Κόραι.

Twirled letters of the first or early second century A.D.; cf. Woodward in *AO* 304, 310, 315 etc. Though badly chipped the stone shows the corner of a *sigma* at the end of line 3; this is the third case of deviation from the normal form θυγατρίδους, gen. -οῦ, cf. θυγατρίδης (Suidas), θυγατρίδη (*OGI* I 377, where Dittenberger (followed by LS<sup>9</sup> and Buck-Petersen *Reverse Index* 28) maintains against Gelzer (following Suidas) the derivation from a hypothetical nominative θυγατρίδης).

Fragment of a marble stele, water worn and broken on all sides, now in the Sparta Museum. Maximum preserved height 19 cms.; breadth 35 cms.; thickness 4-8 cms. Letter and space down (in columns) 1 cm. PLATE 26, 4.

		ΕΙΣΑΡΧ	
		Δια-	
		-ο. ωρα	
		-νιχο	
		παρεσχη	
		-δ. ων - - -	5
-----		-----	
κο]τυλασαλευρ... Β		βαρεατονησ	
ους Β-ωσωνας Β		πυρωνα - - -	
ου χ		ΙΔ οινκορυφαριον	
10	-ων... υψου.	ΙΘ δαμοιοδεργοια	10
ρωδεσμαν		Κ ειστοτας... αν-	
σφακτους Κ σφακτας Δ		-ποχο	
τουλιβανογχοινον ελμεν		ΚΕ εις	

Dashes and dots indicate illegible letter groups and letters on the stone. Trivial lettering, probably not earlier than second century A.D. The references to foodstuffs and wine in column 1, lines 7 and 12 and column 2, lines 8, 9 (οιν(ον?) κορυφ(αία) ἄρτον?) and 11 (σπλάνχνα?) suggest a sacrificial menu.<sup>37</sup> The single figures which follow some of the words should indicate the number of items, though the roasts in column 1, line 12 look out of pro-

<sup>37</sup> For column 1, line 12, cf. Diocletian's tariff, where δίκων is quoted as a standard unit for asparagus and beans.

portion to the liquid measures; and the numerals in front of the right-hand column may stand for days of the month. If κώσωνας is to be restored in column 1, line 8, it follows that *theta* is degraded to *sigma*; and one may then expect the omission of intervocalic *sigma*. It is tempting to restore in the rubric the word εὐαρχία after that which qualifies the *thoinarmostria's* office in *IG* V. i 606.

A big marble stele is imbedded in the staircase of the house of Leonidas Ioannou Papadakos, very close to the place at the top of the village where Dawkins' excavation is said to have been. It is said to have been found on the spot, together with a cross and another inscribed stone now incarcerated in the foundations, when the house was being built in 1929. The right half of the inscribed face is not visible in the present position of the stele.

	Ἡ π[όλις]
	τὴν ἀξιο[λογωτάτην]
	Μαμμίαν[Ξενοκρατίαν]
5	Διεξιμάχο[υ ἐστίαν πό-]
	λεως τὴν[θοιναρμό-]
	στριαν τῶ[ν ἐρῶν ἀμ-]
	φωτέρων[μεγέλοπρε-]
	πῶς καὶ ἀ[ξίως τῆς τε]
	εὐγενείας[τῆς οἰκείας?]
10	καὶ τῆς π[όλεως ἀμφιθα-]
	λειτεύσ[ασαν προσ-]
	δεξαμέν[ων τὸ ἀνάλω-]
	μα Καλλιστ[ράτου?]
	Ἀλκάστου[Ἐτυμοκλη-]
15	δείλας τῶν ἀ[ξιολογωτά-]
	των παιδ[ων αὐτῆς].

Monumental letters of the middle or second half of the second century A.D. The content of lines 1-9 agrees at all points with the incomplete stele *IG* V. i 584,<sup>38</sup> and lines 11-16 seem to duplicate the fragment *ibid.* 604. Kolbe's restoration of the text in 584 and the children's names in 604 can therefore be corrected accordingly.<sup>39</sup> The marbles at the ruins of the church of H. Sophia are once again buried and inaccessible; the substantial difference of the letter forms indicated by Kolbe could mark 584 and 604 as two separate

<sup>38</sup> It was on account of this misleading likeness that I did not examine the new stele more closely.

<sup>39</sup> Tod in *BSA* XXVI 111 has corrected the mis-

reading of [πόλις] in *IG* V. i 584, line 5, and the false emendation Κῆ[αὐθίων] in 604, line 3.

inscriptions. The position of Xenokratia in the tree of the Memmii<sup>40</sup> is uncertain.

The office of *thoinarmostria*, which is mentioned in a number of Laconian and Messenian inscriptions, is attested with certainty only at the sanctuaries of the Eleusinian deities;<sup>41</sup> in her dedication at the sanctuary of the Amyklaian Apollo Memmia Xenokratia is not called *thoinarmostria* but hereditary priestess superior and perpetual visitor, and therefore the phrase θειναρμώστριαν τῶν ἱερῶν ἀμφωτέρων should refer to the double cult at the Eleusinion rather than to two separate cults at the Eleusinion and the Amyklaion. There is in fact only one mention (in *IG* V. i 607) of a hereditary priestess at the Eleusinion, and that not contemporary; and in the other inscriptions the corresponding office is occupied by the *thoinarmostria*, who elsewhere fulfils the functions of a principal, and in the *diagramma* of the Andanian mysteries takes precedence over the priestesses in the procession (*IG* V. i 1390. 30 f.). In the second century A.D. the office of *thoinarmostria* was held by Spartan ladies of the highest standing, who combined it with other priesthoods and with the civic title Ἑστία Πόλεως; the past participle in Klesinika's dedication (*IG* V. i 229, which Fränkel dated between 50 B.C. and A.D. 50), shows that it was not held for life. In two cases it also carried with it the title of ἀγοράρχος.<sup>42</sup>

The present inscription celebrates the *thoinarmostria* Memmia Xenokratia's discharge of an office which is also insufficiently understood—the amphithalitic one to which the dedications of Etymokledeia, Gorgoi and Agesippia relate.<sup>43</sup> The religious functions reserved for children with both parents alive (ἀμφιθαλής) have been sufficiently explored by Oepke,<sup>44</sup> and the inscriptions collected by L. Robert show their special association with agonistic festivals.<sup>45</sup> Cumont's assumption of a 'choir' of acolytes has created a dilemma, since some of the inscriptions show ἀμφιθαλής holding other offices which are appropriate only to adults,<sup>46</sup> and Oepke and Robert have consequently attempted to explain the evidence of the inscriptions away by the arguments

<sup>40</sup> *BSA* XIV, opp. p. 123 and *IG* V. i p. 117 (with revisions *BSA* XXX 224). Woodward, *BSA* XXX 216, has shown that P. M. Pratolaus I was born not later (and perhaps ten or twenty years earlier) than 20 A.D.; the letter forms of Xenokratia's dedication will therefore not permit of her being his granddaughter.

<sup>41</sup> To the eight attested examples (excluding *IG* V. i 608) at Kalývia Sokhás may be added *IG* V. i 1390 and 1498 from Messenia. 1447 is of uncertain origin, but the mystic apparatus and sacrificial victims suggest the cult of the Eleusiniai. The remaining inscription, 589, seems to have been copied by Fourmont a little way south of Anyklai (emend σφ Πίττα in Boeckh's *Imagines* *IG* I 1446) and should therefore have been set up near the Amyklaion, but the narration of Demosthenia's titles and virtues appears to have been copied in full from her earlier dedication at the Eleusinion

(508), where the opening title (to be restored in 589. 1-2 θειναρμώστριαν ἀμφοτέρων) was in fact appropriate. Tod (*JHS* XXXII 100 f.) in reversing his original opinion proposed the restoration θειναρμώστριαν ἑς Ἀπείαν in the Eleusinion dedication 508, but this does not tally with the oblique stroke remarked in the fourth place from the end of the phrase in question.

<sup>42</sup> *IG* V. i 589 and 606.

<sup>43</sup> I cannot see any alternative reading in lines 10-11 apart from the too immodest one πραιποσίτος τοῦ ἱεροῦ.

<sup>44</sup> *Archiv. f. Religionswissenschaft* XXXI (1934) 42 ff.

<sup>45</sup> *Athenian Studies to Ferguson* 509 ff.

<sup>46</sup> E.g. *dekaprotos*, *agonothete*, *panegyriarch*, and here *thoinarmostria*.

that the references to amphithalic service are retrospective or that in imperial times the other offices could be held by children. In fact the Eleusinion dedications show a surprising range in the age of the holders of this office; for eight years after Agesippia had assumed it her great-grandmother was still alive, while Xenokratia had three children capable of making a dedication in her honour when she laid it down. In the second century A.D. the office cannot have required constant residence at the sanctuary since Xenokratia was able to combine it with her duties at the Amyklaion and to her family. It is not clear whether the function involved was that of the ἀμφιθαλής or of the mistress of the ἀμφιθαλείς; Oepke has suggested a distinction between the forms ἀμφιθαλής on the one hand and ἀμφιθαλεύς (with the verb ἀμφιθαλεύειν) on the other hand,<sup>47</sup> and the ordinance of Magnesia ad Maeandrum, which provides for the drafting of no less than eighteen young ἀμφιθαλείς at the festival of Zeus Sosipolis,<sup>48</sup> illustrates the need for supervision; in any case the derivative form of the verb ἀμφιθαλιτεύειν lends support to Oepke's distinction.

The sanctuary at Kalývia belonged properly to Demeter alone; for Pausanias says simply Δήμητρος ἐπικλήσιν Ἐλευσινίως ἐστὶν ἱερὸν, and the seasonal journeys of the image of Kore from Helos to the Eleusinion imply that the daughter was a visitor there.<sup>49</sup> The inscriptions at Kalývia Sokhás show that in fact the pair normally received dedications jointly, but the separation in the cult is borne out by the tile-stamps and the title θοιναρμόστρια τῶν ἱερῶν ἀμφοτέρων.<sup>50</sup> The sanctuary was an extensive one. Its south corner is fixed by the mouth of the ravine, while the tiles that Dawkins found in 1910 suggest that important religious buildings lay some four or five hundred metres away at the foot of the slope to the north-west, where in fact the one located *thoinarmostria's* dedication has come to light. The objects found in Dawkins' trenches, like those from the torrent bed, seem to be in the main of a comparative late date; but the assumption of a longer history to the cult is supported by the Corinthian figurine fig. 10, 3 and the sixth-century (Laconian III or IV) potsherd reported by Dawkins,<sup>51</sup> as well as by the *xoanon* of Orpheus mentioned by Pausanias and the prominence of the festival of the *Eleuhunia* in the fifth century when Damonon was breaking all records in the Laconian games.<sup>52</sup>

The south corner of the sanctuary by the torrent bed seems to have been

<sup>47</sup> *Op. cit.* 30 n. 3.

<sup>48</sup> Kern *Inscr. Magnesia* no. 98. 18-21 (= SIG<sup>3</sup> 589).

<sup>49</sup> Paus. III, 20, 5-7. Cf. also τὸν ἀγῶνα τῶν Ἐλευσινίων Ἀσπασπος in the bogus Spartan decree against Timotheos (Bourguet *Dialecte laconien* 154), and Herychius s.o. Ἐλευσίνια (ἀγῶν θυιατικῶς ἀγόμενος

Δήμητρος παρὰ Λάκωνων, as Wide *Lakonische Kulte* 119 f.).

<sup>50</sup> Kalbe's introduction of the *Agroterai* into the sanctuary can be dismissed (*JG* V. i 1515a) since the true reading must be [ἀμφο]τέρων.

<sup>51</sup> *BSA* XVI 14.

<sup>52</sup> *JG* V. i 213.

virgin until at least the fourth century B.C.; thereafter it gradually came to be covered by small constructions including Kymbadeia's enclosure and other personal dedications. It is unfortunate that there is no clue to the disposition of the table and chairs which were washed up by the torrent. Such tables have been found inside the temple of Despoina at Lykosoura, and chairs at the Anaktoron in the Telesterion at Eleusis, while the cella of Apollo Zoster in Attica shows a complete internal arrangement with a marble chair, tables, bases with inscribed kerbs, and a basin in the doorway.<sup>53</sup> But the table and chairs at the Eleusinion were not intended to rest on a pavement, and the absence of inscribed tiles and larger architectural members tells against the presence of a temple or *telesterion* at the torrent bed. Amphithalitic dedications have come to light at no other point on the site; for Memmia Xenokratia's dedications, though occasioned by her relinquishment of that office, were set up in honour of the *thoinarmostria*: and it may therefore be supposed that this remote corner of the sanctuary served to accommodate those who performed the amphithalitic functions on the occasion of the festivals.

J. M. Cook

#### ΑΜΥΚΛΑΙ.

White marble block from cornice or crowning moulding; in gardens between Amyklaion and Slavokhóri. Length 82 cms.; breadth 30 cms.; thickness c. 30 cms. On lower cavetto in letters 10.5 cms. high -ΘΗΚΑΝ-. The block has been re-used as a stele, one end being cut to form a plain gable top and the inscription engraved on the backside. Letter and space down 4.4 cms.

Ἡ πόλις  
[[Ἡ [πό]λις?]]  
τὸν ἀξιολογώτα-  
τον Τιβέριον Κλαύδιον  
Ῥουφεῖνον Ὑγι-  
5 νου ἱερνίκην  
τὸν ἀσύγκριτον  
ἀγορανόμον  
Μάρ(κος) Αὐρήλιος  
Ἐπιτευκτικός (Ἐπιτευκτικοῦ)  
10 τοῦ Κλησῆ τὸν  
γνήσιον φίλον.

Monumental lettering of the middle or late second century A.D., as AO pl. 2012. Line 1 erased and recut above by an unskilled hand. For the

<sup>53</sup> *Adelt* XI 28 fig. 20, etc.

names Hygeinos cf. *IG V. i 653a*, *BSA XXVI 210* no. 9, Epiteuktikos cf. *IG V. i 78. 11* (see *BSA XLIII 229*), *BSA XXVI 237*. Mr. Woodward has drawn my attention to a similar omission of the formula προσδεξαμένου τῷ ἀνάλωμα in *IG V. i 556a* where the honorand's colleagues associated themselves with the city. There are a number of Laconian stelai on which simple friendship is given as the motive of the dedication,<sup>54</sup> and it is doubtful whether the singular phrase γνήσιος φίλος implies anything more than a personal attachment.<sup>55</sup> The introduction of a third person in the motive of the dedication is barely credible; Klesas may be the grandfather or the elder Epiteuktikos' common name (i.e. τοῦ (καὶ) Κλησῆ).

J. M. C.

### SPARTA.

At the request of the Ministry of Education the Director of the British School undertook the archaeological investigation of a plot of ground, close to the acropolis, which had been acquired and cleared by the Committee of the National Stadion of Sparta with the intention of laying out a football field. A small excavation and a number of soundings were made in November 1949 with funds provided by the municipality. The following report on the discoveries made has been written by Mr. R. V. Nicholls, who supervised the workmen and drew the plans.

The plot of ground lies between the south-east end of the acropolis and the edge of the modern town (see plan, fig. 12) and therefore, presumably, in the heart of the ancient city as described by Pausanias.<sup>56</sup> Towards the north-west of the site part of a large Late Roman building had already been probed by Mr. Ph. Stavropoulos of the Greek Antiquities Service. Work was continued in this area with the result that four mosaic pavements were uncovered (fig. 12, trench 7). Elsewhere, however, in the face of a considerable depth of late Roman and mediaeval deposit, it was found necessary to limit investigations to a number of small, deep probes. In all six of these were made, numbered 1-6 on the plan. In recording the results of this work and in preparing them for publication a considerable debt of gratitude needs to be acknowledged to the Borough Survey Office at Sparta for supplying information and equipment and to the staff of the Agora Excavations in Athens, not only for permission to examine their comparative material, but also for extending every help to do so. Thanks are also due to J. M. Cook and B. B. Shefton for certain of the photographs.

Test-pits 1 and 2 had to be abandoned in upper levels as a result of heavy

<sup>54</sup> E.g. *IG V. i 526*, 529, 530.

<sup>55</sup> Cf. F. Poland *Geschichte d. griech. Vasenmuseums* 53.

<sup>56</sup> III, 11, 1 ff.

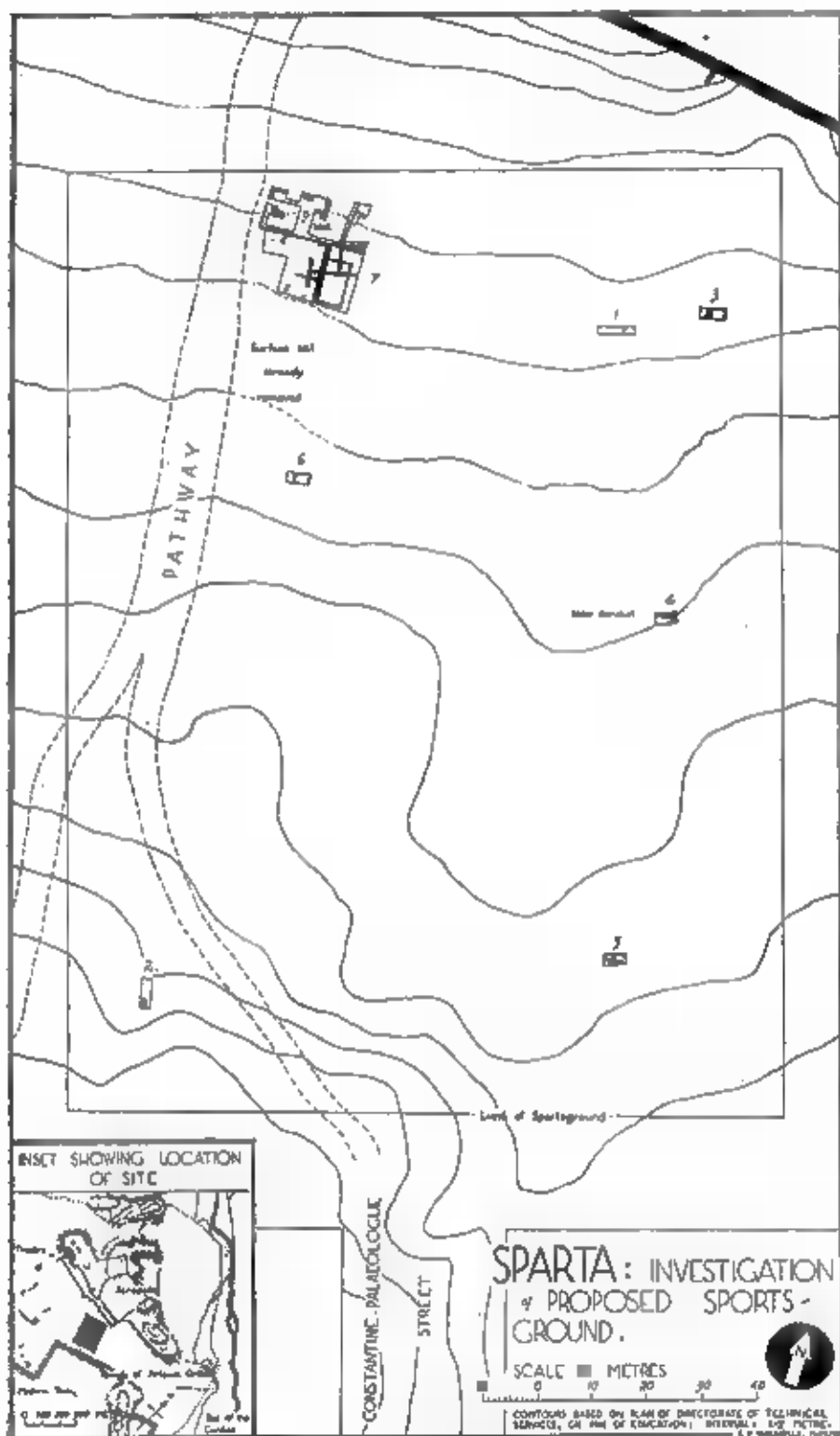


FIG. 12.—SPARTA: LOCATION OF SITE.



flooding. However, 3, 5 and ■ were carried down to virgin clay, which was reached at 99.9, 98 and 99.1 metres above the local survey datum (3.2, 3.3 and 2.8 metres respectively beneath the present surface). In all three cases the earliest stratum was marked by similar pottery, which cannot be dated exactly but is probably assignable to the late sixth or early fifth century B.C. (see Catalogue, 1-3). There were no traces of building remains associated with these lowest levels, but in two cases the stratum was sealed with burning. In test-pit 5 this level was followed by a deposit of heavy sandy grit, in places of almost cement hardness and attaining a maximum depth of nearly a metre. Its nature rests obscure, though the rarity of joining sherds suggests that it came from elsewhere. Of the pottery from this grit stratum, almost all the fragments which can be dated belong to the second half of the fifth century.<sup>57</sup> The outer wall of a house cut down into this grit deposit is probably to be assigned to a slightly later date. Test-pit 3 yielded an occupation level, tentatively attributed to the early fourth century B.C.,<sup>58</sup> and above, one of the second century B.C. In test-pit 5 four Late Roman pipes had been sunk into a Hellenistic and Early Roman deposit, with Late Roman occupation occurring above, while in 6 the earliest stratum, already described, was succeeded, after a few traces of the first century B.C., by a heavy Late Roman deposit. Test-pit 3 produced an occupation level of the mid- to late-fourth century A.D. and a later one that could not be dated.

Middle Byzantine occupation was quite extensive, house-traces of this period occurring in all the three trenches under examination. That in test-pit 5 could be assigned to the twelfth century A.D., but in the case of the other two trenches the material was insufficient to permit any precision of dating. However, in test-pit 3 the fill above the house floor was characterised by glazed pottery of the twelfth century and contained a hoard of bronze coins<sup>59</sup> of which the latest is probably assignable to the reign of Alexius I. Of more recent occupation there was very little trace.

Test-pit 4 revealed a level area, partially paved with cement, at 100.85 metres above datum (1.30 metres beneath the present surface). Bounding this to the north-east and running diagonally across the corner of the trench was a cement-set stone wall foundation with a slightly projecting footing of tile and small stones; running approximately parallel to it at a distance of some thirty centimetres was a square drain with walls of fine Roman brick (FIG. 13). The drain had a width of 35 centimetres and a depth of 40. It was paved with tiles 27 centimetres square and roofed with heavy rectangular slabs of tile over 5 centimetres thick decorated with finger-drawn diagonals. These slabs had a width of 40 centimetres and varied in length between 45 and

<sup>57</sup> See Catalogue under 4 and 5.

<sup>58</sup> Catalogue 7-9, 11-16.

<sup>59</sup> Catalogue 27-45.

50 centimetres. The floor of the drain was perfectly level, but the configuration of the ground at this point makes it very likely that the water flowed from west to east. The pottery found inside the drain shows that it did not go out of use before the third century A.D. About fifty metres east of the south-east corner of the site of the sportsground the existence was reported of an underground construction which might prove to be the arterial channel with which our drain connects. However, its connection, if any, with the drainage systems at the theatre ■ and at the temple of Artemis Orthia <sup>61</sup> rests obscure.



FIG. 13.—SPARTA: ROMAN BRICK DRAIN.

Perhaps not unrelated to it are the four drain-pipes in test-pit 5, mentioned above. Except for the uppermost, which was constructed in two halves of tapering, semi-cylindrical tiles, all these pipes were of much the same wheel-made type with a diameter of about 14 centimetres. All save the lowest had been cut through by a later pit, but enough of the joints survived to make it clear that in every case the water was intended to flow from west to east.

The dwelling walls throughout were of ■ rubble construction with earth mortar or, more usually in the Hellenistic and Roman levels, with ■ bonding of cement. A fourth century B.C. construction cut into the grit stratum in test-pit 5 had its interior walls coated with a bright red plaster. Also, painted

<sup>60</sup> *BSA* XII, 396, XXVII, 202, XXVIII, ■ and 18.

<sup>61</sup> *BSA* XV, 15; *AO*, 28-31.

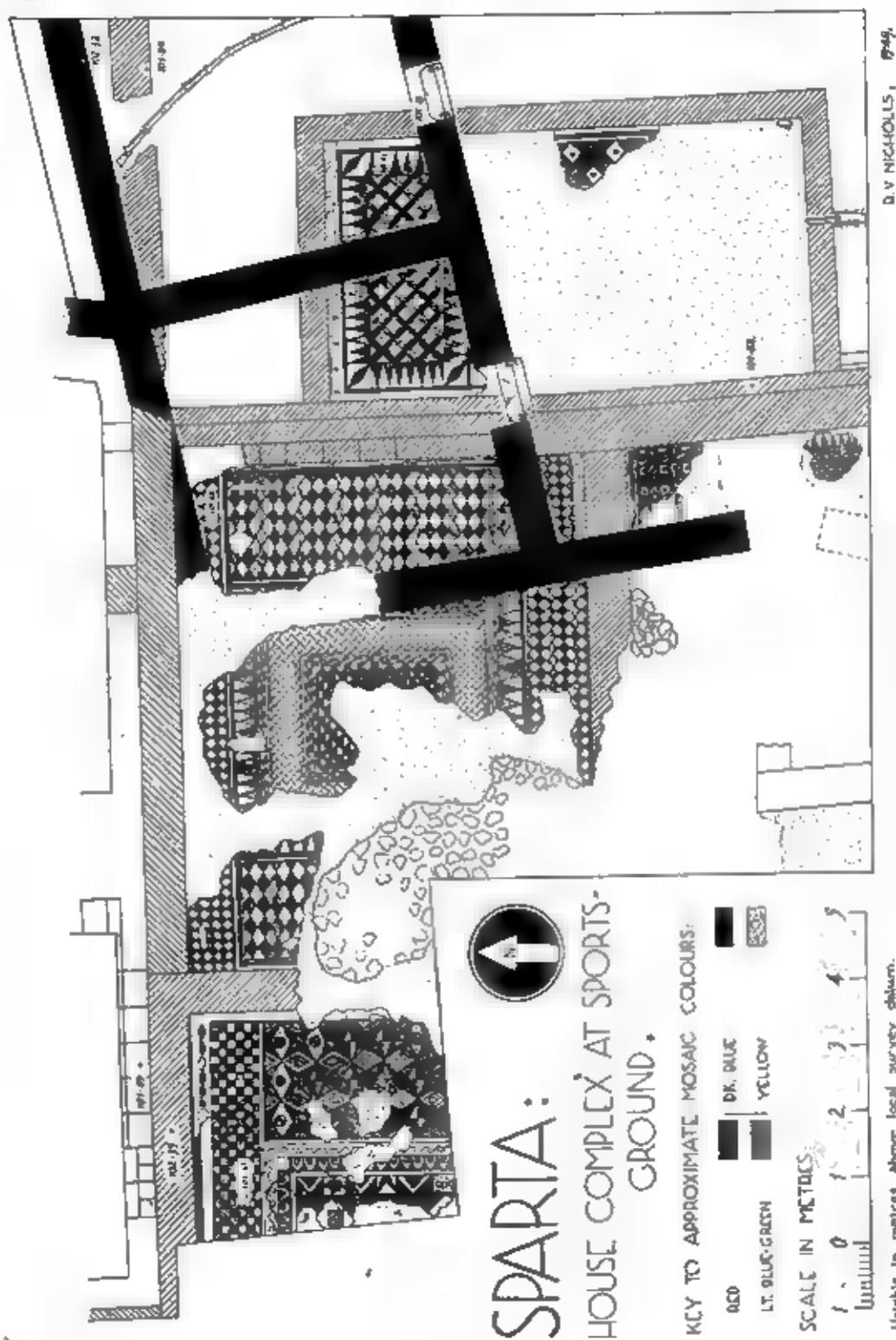


FIG. 14.—SPARTA: PLAN OF STRUCTURES IN SEVENTH TRENCH.

plaster had been used to decorate the cement-bound walls of a second century B.C. building in test-pit 3. None of this was found in position, but considerable quantities of it lay face-down above the floor. In addition to employing the four colours, black, yellow, red and cream, the decoration used panelling in shallow relief.

Towards the north-west of the sportsground the seventh trench revealed three constructions of different periods, all built on the same level (see plan

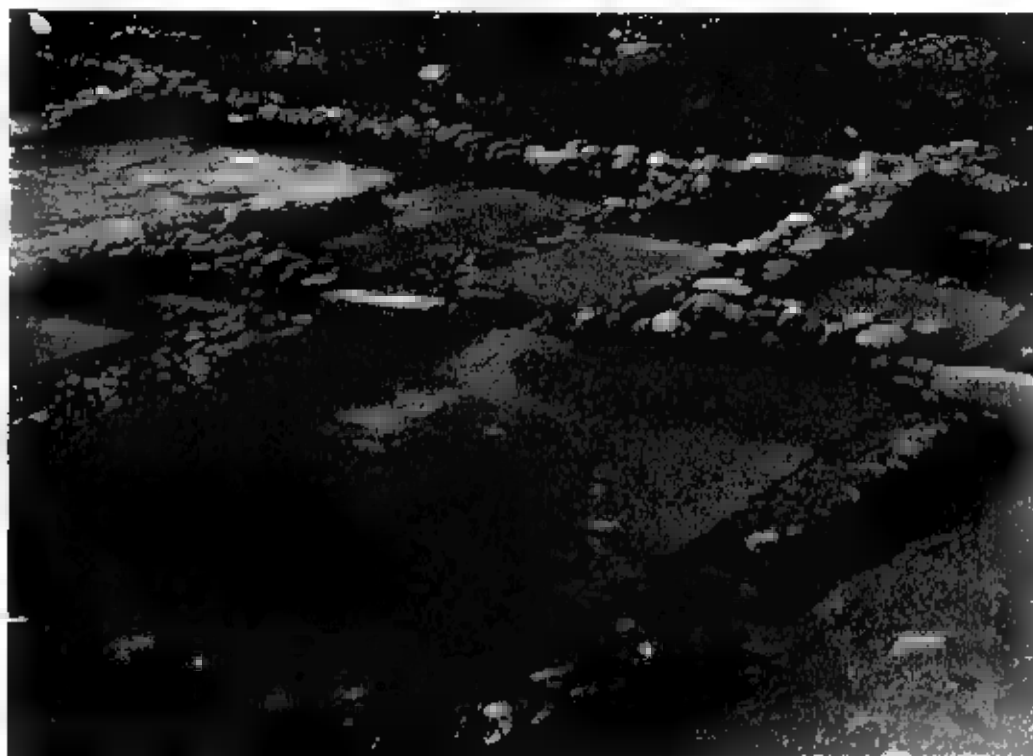


FIG. 15.—SPARTA: STRUCTURES IN SEVENTH TRENCH.

FIG. 14 and photograph, FIG. 15) and thereby making the task of establishing their respective dates a very difficult one, especially as, in the interests of conservation, digging beneath the mosaic and cement floors was avoided. Belonging to the earliest of these construction periods four mosaic-paved rooms of a large Roman building were wholly or partially cleared. The building was probably a house, though so little of it now survives that it is not easy to be sure of its original purpose, few of the walls being preserved above their bottommost foundations. Various small fragments of painted plaster and of revetting in *lapis Lacedaemonius*, found in the later fill above it, may

come from the decoration of this building, as may certain architectural fragments<sup>63</sup> from the debris apparently dumped in the second construction period. But in this no certainty can obtain.

The mosaics were laid in a manner much as prescribed by Vitruvius.<sup>64</sup> A substantial foundation of stones, apparently incorporating in the southernmost room the levelled remains of earlier walls, had been covered with a layer of coarse greyish cement, above which had been spread a further, rather thin cement layer, red from the admixture of ground-up potsherds. In this were set the tesserae, somewhat large and coarse, with an average length of about one and a quarter centimetres. These were all of stone and were limited to the following colours: white, a light greyish shade with a blue-green tinge, dark blue, a mauvish red and yellow. There were no intermediate gradations in these colours, and in cable patterns, interlaces, and guilloches a tonal effect was obtained merely by ranging them side by side, 'rainbow-wise'.<sup>65</sup> Another characteristic tendency, observable in the checkerboards of lozenges in the central room and of squares in the western one, is to have dark blue, blue-green and red succeed each other, interspaced with two rows of white checkers and one of yellow.

In the westernmost room the mosaic paving had been repaired in antiquity at three points (see the plan FIG. 14, and PLATE 28). The repair showed a tendency to replace the white of the original mosaic with yellow. Also, along the edge of the repaired area in the checkerboard, certain red squares have been partially restored in blue and, beyond, the string of green, red, yellow and blue lentils at the border has been replaced by a simple dark blue band. The fact that this band is more truly orientated to the room as it now stands suggests that the wall to the north, in its present form with its heavy ashlar footing and rubble and cement construction above, may also date from the time of the repair. In the panel of four-pointed stars the filling of quartered circles has been replaced by one of quartered diamonds and the colour scheme of the original mosaic considerably modified. The workmanship in the restored areas is noticeably coarser than in the original paving.

The excavation has yielded little external evidence for dating these mosaics. However, the easternmost walls of the house overlies a stratum which in the present state of knowledge cannot be dated closely, but must come well down into the second century A.D.<sup>66</sup> It will probably not be wrong to say that the mosaics are not to be dated before the late second century.<sup>67</sup> The fixing of

<sup>63</sup> Catalogue 47-50.

<sup>64</sup> *De Arch.* VII, 1.

<sup>65</sup> This does not, however, seem to afford any criterion of lateness of date.

<sup>66</sup> A little pottery of about the end of the third

century A.D. also occurs, but only where there was disturbance in the second building period.

<sup>67</sup> A similar date has been suggested by J. Travlos on technical grounds.

the upper limit must depend on stylistic criteria and unfortunately these cannot greatly avail, as the patterns involved had a life of several centuries. Yet if the mosaics be considered as a whole, it is observable that the conservative and clearcut nature of their motifs has, despite the discordant use of colour, little in common with the fully developed 'rainbow style',<sup>67</sup> thus favouring a date before the mid-third century. The house, then, may tentatively be assigned to a period before the Herulian sack of Sparta in 267 A.D., with the possibility that it was itself destroyed in that sack.<sup>68</sup>

After an intermediate period represented in the northeast corner of the trench by a drainpipe of a type similar to those in test-pit 5, but with an average diameter of only 9 centimetres, the walls of the eastern part of the house were razed to pavement level and, at a date not earlier than the beginning of the fourth century, another building on a different orientation was erected immediately on the floors of its predecessor. The northeast corner of the western room of the new construction seems at first to have served as a tile-paved basin. Later a cement floor appears to have been added on a level with the mosaic to the south. Whether the restoration of the western room of the former mosaic house is pre-Herulian, dates to about this time, or belongs to the next construction period, there is not the evidence to determine.

Later, part of the walls of the second building were razed to permit the immediate superimposition of the southern wall of the large house to the north, probed by the Greek Archaeological Service. Exactly when this took place cannot be said, but the pottery found immediately above the mosaic floors suggests that occupation on or near some, at least, of them came down into the fifth century. Certainly between 20 and 30 centimetres above them the whole area was sealed with a heavy stratum of large curved tiles, associated in places with considerable traces of burning. Under this heavy stratum the latest datable pottery was early Late Roman C ware of about the late fifth century. Immediately above were found a few Byzantine fragments, including a brown-glazed cup and a lamp of Broneer's type XXXVI.<sup>69</sup>

In conclusion it may be stated that these probes in the area to the south-east of the Spartan acropolis have failed, like those made by the British School in 1906,<sup>70</sup> to yield positive and definite signs of the exact whereabouts of the ancient agora, though it remains reasonably certain that it lies somewhere in this vicinity.<sup>71</sup>

<sup>67</sup> Levi, *Antique Mosaic Pavements*, 406 ff.

<sup>68</sup> Syncellus, p. 717, 17 (ed. Dindorf). Cf. *BSA* XII, 428; *BCR* LXXI-LXXII, 394.

<sup>69</sup> Cf. *Hesperia* VII, 449, 454, etc.

<sup>70</sup> *BSA* XII, 431 ff.

<sup>71</sup> By inference from Pausanias III, 14, 1.

## SELECTIVE CATALOGUE OF OBJECTS

(A) Pottery.<sup>72</sup>

Almost the whole of the pottery from the early levels is undecorated, the dominant ware being a plain black-glazed variety of apparently local fabric. Unfortunately Laconian black-glazed pottery seems, in part at least, to have

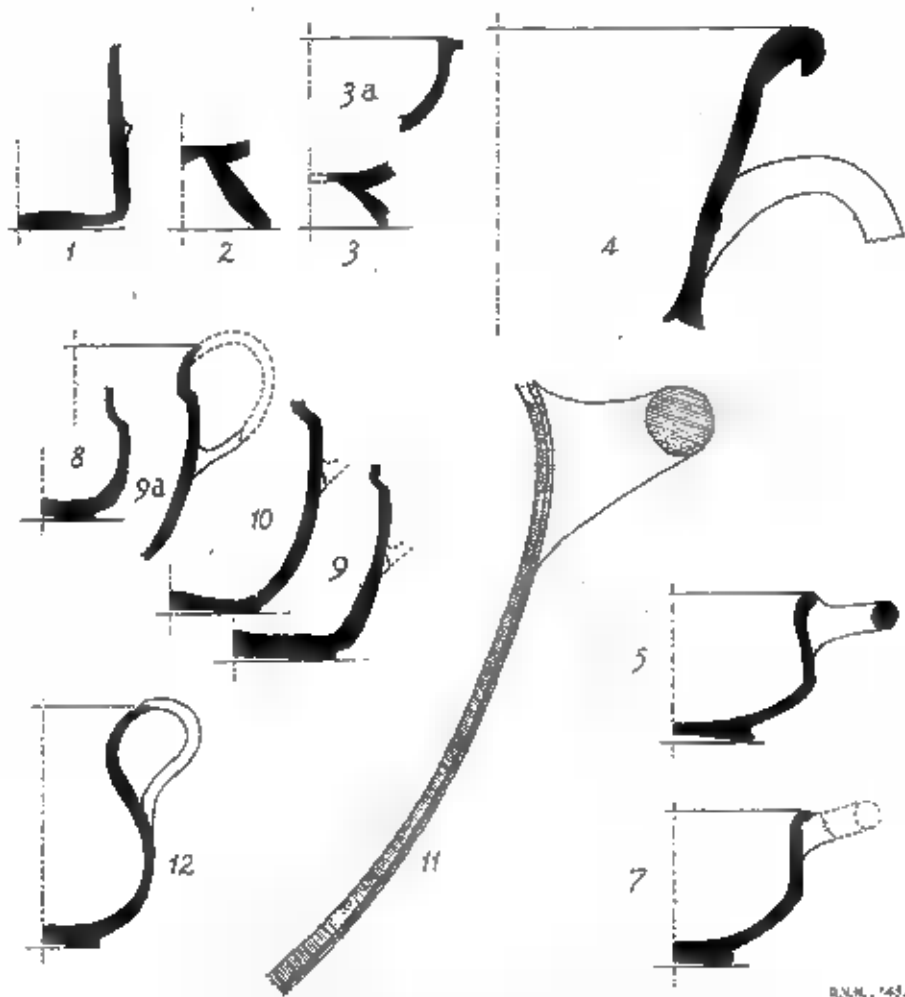


FIG. 16.—SPARTA: POTTERY SECTIONS.

led a life of its own,<sup>73</sup> a fact which frequently makes it difficult to date it with reference to other contemporary fabrics, most notably Attic. The sports-ground material is too limited for stratigraphical data to avail far.

<sup>72</sup> Dimensions given in metres.

<sup>73</sup> Cf. *BSA* XXXIV, 154.

1-3 are from the lowest levels in test-pits 3 and 6. They are certainly to be dated before the end of the fifth century, probably before its middle. 2 looks distinctly early. 4 and 5 are from the grit stratum in test-pit 5 (see page 284), which produced a number of sherds of Attic black glaze ware, or of a fabric indistinguishable from it, ranging from the middle to the end of the fifth century.

7-9 and 11-16 are all from the one occupation deposit in test-pit 3. Unfortunately this was not sealed and there is probably intrusion. The cups 7 are little removed from 5. The small wide-mouthed jug 8 can hardly be much later than the early fourth century, and might be earlier, as might also be the mugs 9 and 10. 10 is actually from a stratum of apparently earlier date. There were two lamp fragments, one of a late fifth century variety and the other of a type current from the beginning of the fourth century. However, the flask neck 13 bears a striking resemblance in profile to the necks and lips of Attic spheroid oinochoai of the later fourth century. This may be mere coincidence, but it serves as a warning that this material may not form so compact a group as it appears to do.

The clay is highly micaceous and varies in colour from red through orange-buff to dull grey; but such specimens as 8 show that these differences in colour are merely due to the conditions of firing. The grey clay tends to predominate from about the beginning of the fourth century. The glaze of the later specimens is often metallic, sometimes dull and lustreless.

1. Fragmentary beaker-shaped cup (PLATE 29; FIG. 16): diam. 0.068; preserved ht. 0.055; junction of vertical strap handle preserved; micaceous orange-buff clay; dull black glaze inside and out; reserved area on foot with inscribed circle. Cf. *AM* LII, 57 and the earlier variety in *BSA* XXXIV, 155, fig. 20 B. Frs. of two others, one larger (diam. c. 0.09) and without reserved area.
2. Conical foot (PLATE 29; FIG. 16): diam. 0.056; glaze and clay as in 1.
3. Foot of small cup or bowl (PLATE 29; FIG. 16): diam. 0.046; light buff micaceous clay (non-Laconian?); interior glazed, with reserved area at centre; exterior unglazed, but polished. A fr. of identical fabric 3a (FIG. 16) may perhaps supply a typical rim.
4. Black-glazed amphora neck (FIG. 16): diam. 0.218; preserved ht. 0.088; light orange micaceous clay with grey core; metallic glaze.
5. Cup (FIG. 16): ht. 0.047; diam. 0.092; grey and orange slightly micaceous clay; lustrous glaze all over; fragmentary state of material prevents establishing definitely that this shape had two handles. See also 7.
6. Fr. of neck and shoulder, probably of amphora (PLATE 29): red micaceous clay; Laconian fabric; cf. Droop's Laconian VI class (*AO* fig. 86; *BSA* XXVIII, 75, fig. 15). Date uncertain; context apparently late fifth or early fourth century.
7. Fragmentary cup (PLATE 29; FIG. 16): ht. 0.049; diam. 0.088; grey micaceous clay; dull black glaze, save under foot. Also frs. of two other identical cups; they show squatter, less rounded handles (e.g. 7a, PLATE 29) and higher walls than 5.<sup>74</sup>

<sup>74</sup> E. Corbett has suggested that the feet of these cups display a careless device for achieving the effect of ring feet without taking the trouble, and draws my attention to similar feet on black-glazed pottery from

Ithaca (*BSA* XXXIX, 26 nos. 69 and 70). Not dissimilar feet do occasionally occur on coarse black-glazed pottery in Corinth.



8. Fragmentary small wide-mouthed jug (PLATE 29; FIG. 16): preserved ht. 0.042; diam. 0.055; grey and orange micaceous clay; rather metallic black glaze, partly misfired to red; vertical hand-cut fluting on walls, crossing diagonals under handle. An earlier Attic example (cf. *Hesperia* IV, 508-9) was represented in the grit stratum (see pp. 284 and 291), but the narrow angular shoulder sunders it from Attic types, and relates it to 9 and 10.
9. Fragmentary mug (PLATE 29; FIG. 16): preserved ht. 0.067; diam. 0.094; grey micaceous clay; thin streaky glaze; traces of vertical strap handle. 9a (FIG. 16) from same stratum probably suggests typical lip profile.
10. Fragmentary mug (FIG. 16): preserved ht. 0.062; diam. 0.098; slightly different profile from 9; clay fired to light orange-buff, glaze to orange-brown.
11. Several frs. from the wall of a large ribbed vessel, probably a hydria, though the angle of handles is peculiar (PLATE 29; FIG. 16): diam. c. 0.36; red micaceous clay; glaze streaky, slightly metallic; ribs cut in thin layer of finer lighter clay, possibly added when the pot was leather-hard.
12. Small oinochoe (PLATE 29; FIG. 16): ht. 0.076; diam. 0.069; micaceous grey clay; dull glaze; incised line encircling lower part of belly four times, spiral-wise. Neck broader than in late fifth century Attic specimens. Similar, but with different lip and handle, is *CVA Oxford* II, pl. 65, 1. Cf. *CVA U.S.A.* VIII, pl. 24, 3.
13. Neck and lip of two-handled flask (PLATE 29): preserved ht. 0.044; orange micaceous clay, grey at core; dull glaze.
14. Conical loomweight (PLATE 29): ht. 0.053; on side, heart-shaped stamp; underneath, indistinct roundish stamp with serrated edge. Also one other fragmentary example. Though not common in Athens (*Hesperia* Suppl. VII, 76), loomweights of this type were already in regular use at Olynthus before the mid-fourth century (*Olynthus* IV, 118 ff.).
15. Fragmentary miniature hydria (PLATE 29): preserved ht. 0.076; orange micaceous clay; wheelmade. Type common at the Amyklaion (*AM* LII, pl. XV, 31-33, especially 32). The miniature hydriai from Artemis Orthia (*AO* fig. 82 k; *CVA Cambridge* I, pl. 4, 4) and the Megalopolis road sanctuary (*BSA* XIII, 172, fig. 2 f) appear to have been of a different type.
16. Miniature cup with top pinched in from four sides (PLATE 29): ht. 0.063; bright orange micaceous clay; handmade. Again an Amyklaion type (*AM* LII, pl. XV, 34).

If this last deposit is not to be placed any later than the early fourth century B.C. the investigations in this area have yielded hardly any traces of later fourth or of third century occupation. The second and first centuries B.C. are a little better represented, but the material is hopelessly fragmentary. The Roman pottery series indicates fairly continuous occupation from the beginning of our era till about the end of the fifth century A.D. As the finer fabrics are too rare and ill-preserved to offer much new information this account will confine itself to a selection of coarse wares.

The pithos 17 contained late second and third century A.D. pottery. 18 and 19 are of a distinctive ware that may be local. 18 is from a stratum dated by late Late Roman A ware and by Late Roman B fragments of Waage's profiles 869 p and probably 819 (Waage, *Antioch* IV, pls. VIII and IX), suggesting a probable lower limit in the mid- to late fourth or possibly early fifth century A.D. (Waage, *op. cit.* 55).

The amphorae and amphora lids 20-26 were all found above the mosaic floors in trench 7. Under the tile stratum that sealed them the latest datable

pottery was early Late Roman C (Waage, *op. cit.* 56), probably assignable to the late fifth century A.D. The other limit is hard to fix. 24 and 25 probably

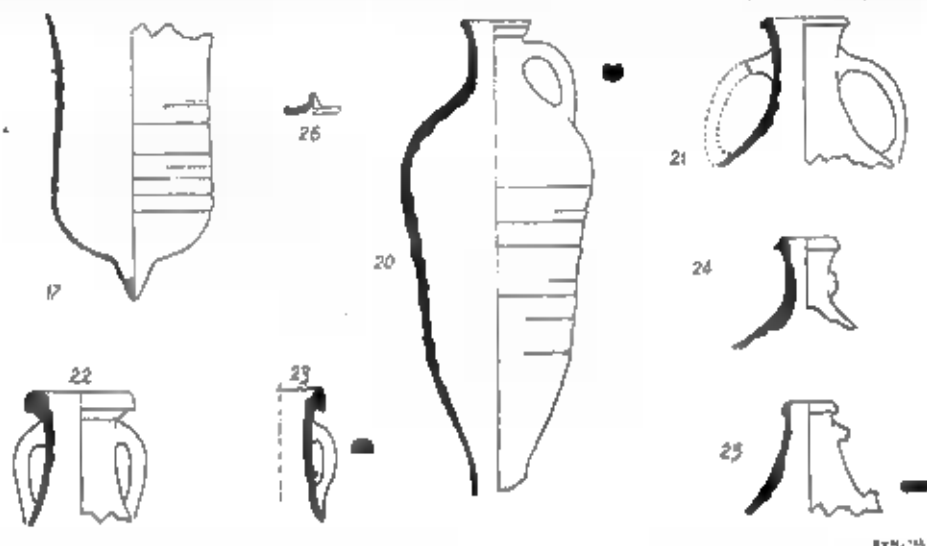


FIG. 17.—SPARTA: SECTIONS OF STORAGE JARS AND AMPHORAE.

date from the end of the second occupation on top of the mosaics, which apparently did not start before the beginning of the fourth century. The remainder are from above the repaired mosaic (see p. 288).

17. Storage pithos (FIG. 17): preserved ht. 0.62; brittle mauve-brown clay with white specks of impurity.
18. Fragment from wall of closed vessel (PLATE 29): ht. 0.079; orange-buff, slightly micaceous clay; dull black glaze; incision and rouletting.
19. Fragment from shoulder of spheroid jug (?) (PLATE 29): max. dimens. 0.074; fabric much as 18.
20. One-handled storage jar (FIG. 17): preserved ht. 0.52; diam. 0.21; orange micaceous clay.
21. Amphora neck (FIG. 17): preserved ht. 0.164; bright orange micaceous clay.
22. Amphora neck (FIG. 17): preserved ht. 0.145; orange-red clay; heavy cream slip.
23. Amphora neck fr. (FIG. 17): preserved ht. 0.145; bright orange micaceous clay.
24. Neck of one-handled storage jar (FIG. 17): preserved ht. 0.12; bright orange micaceous clay.
25. Neck of one-handled storage jar (FIG. 17): preserved ht. 0.122; orange-red micaceous clay with black core.
26. Amphora stopper (FIG. 17): diam. 0.063; orange micaceous clay; flat prism-shaped grip. Also other specimens with cylindrical grip.

Very little early Byzantine pottery was found. However, basing the chronology on the Athenian material which the Spartan closely resembles (*Hesperia* VII, 429 ff.), it is found that there is evidence of extensive occupation throughout the twelfth century, but little definitely assignable to a later date. On Byzantine glazed pottery from Sparta, see *BSA* XVII, 23 ff.

## (B) Coins.

The following nineteen Byzantine coins constitute a hoard found in a twelfth century level in test-pit 3. No traces were observed of the bag in which they had, presumably, originally corroded together. For the sake of brevity the anonymous pieces are not described, but simply referred to by the classification numbers devised by Bellinger (*Numismatic Notes and Monographs*, no. 35). Mrs. Shear (*Hesperia* V, 148-9) assigns Classes V-IX to reigns different from those proposed by Bellinger. An apparent obstacle to her arrangement, a Class VIII coin described by Bellinger (*op. cit.* 8) as overstruck on a signed bronze of Nicephorus III and as being in the British Museum, cannot be traced in that quarter. To the contrary, Mrs. Shear informs me, the evidence of the Agora excavations is overwhelming for the overstriking of Nicephorus III's signed issues on Class VIII. All the pieces in the hoard are bronze.

## (a) Anonymous Issues.

No.	Size.	Class.	Remarks.
27-28	0.028-0.029	I. Assigned by Bellinger and Mrs. Shear to Basil I and Constantine VIII (976-1025) or Constantine VIII alone (1025-1028) or Romanus III (1028-1034).	One belongs to Bellinger's subdivision 41, the other to 47.
29-36	0.026-0.032	II. Michael IV (?), 1034-41 (Bellinger and Shear).	All restruck, seven of them identifiably on Class I (of these, one on I. 47, one on I. 47 or I. 44, one on I. 42 or I. 45).
37	0.031	III. Constantine IX (?), 1042-1055 (Bellinger and Shear).	Inscription on rev.: $\Gamma$ XC/RI KA (B.M.C. 307; Bellinger, <i>op. cit.</i> , 5, n. 1.).
38-39	0.029-0.03	VI. Constantine X (?), 1039-1067 (Shear); Isaac I (?), 1057-1059 (Bellinger).	Both restruck, the one certainly, the other probably, on Class III.
40	0.029	VII. Romanus IV (?), 1067-1071 (Shear); Michael VII (?), 1071-1078 (Bellinger).	—
41	0.047	X. Alexius I (?), 1081-1118 (Bellinger and Shear).	Restruck on signed bronze of Nicephorus III, itself restruck.
42	0.027	XI. Alexius I (?), 1081-1118 (Bellinger and Shear).	Restruck on signed bronze of Nicephorus III.

## (b) Signed Issues.

## I. Constantine X and Eudocia, 1059-1067.

No.	Size.	Description.	Remarks.
43	0.029	Obs.: + KΩNTAK (on r.); EVAKAVFO (on l.); Constantine and Eudocia standing facing, holding labarum.	Restruck. See Wroth, BMC, 517.

## II. Nicephorus III, 1078-1081.

No.	Size.	Description.	Remarks.
44	0.025	Obs.: Christ nimbate standing facing; r. hand in blessing, l. holding Gospel. In field: IC, star, XC, star.	Restruck. See Wroth, BMC, 538.

## III. Uncertain.

No.	Size:	Description.	Rev.:	Remarks.
45	0.027	Obs.: Bust of Christ; wears mantle, nimbus with plain cross. Lower part of figure obliterated. Border of dots.	Rev.: . . (?) NB. Cross on pedestal with two short crossing diagonals at centre, three globules at each of three upper extremities. Border of dots.	Restuck, as Mrs. Shear has kindly pointed out, on a signed bronze of Constantine X and Eudocia. An unidentified type. <sup>12</sup> Die positions, ↓↑.

PLATE 29

## (C) Architectural Fragments.

46. Corinthian architrave and frieze block (FIG. 18): ht. 0.41; thickness 0.195; preserved length 0.34; blue-white Taygetus marble. Found amongst twelfth century debris in test-pit 3. Inscribed (see 51). Preserved end to right, roughly dressed (subsequently?). Good rasped surfaces at top, bottom and back; face claw-chiselled, but rougher work on inscribed portion. Broken to left; break appears to have occurred in antiquity; five U-clamps used to effect a repair. On the treatment of the frieze, cf. the so-called 'Incantada' at Salonica (Stuart and Revett, *Antiquities of Athens* III, 53 ff.). Other examples from Ephesus and Mylasa (Durm, *Baukunst der Griechen*, 355) and Sparta (*BSA* XXX, 187, no. 10).

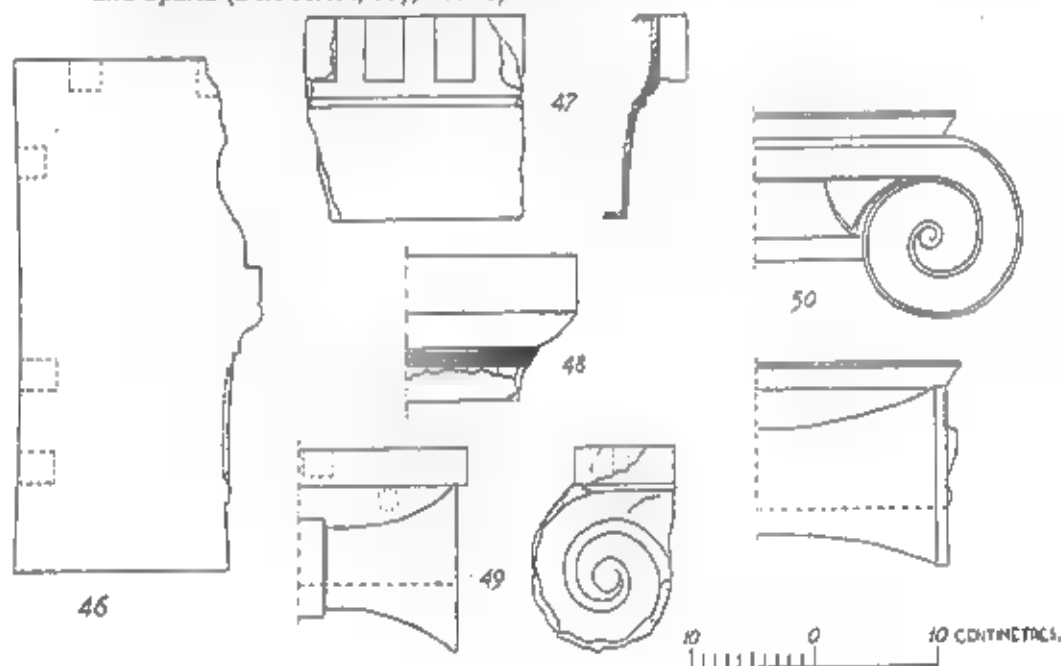


FIG. 18.—SPARTA: ARCHITECTURAL FRAGMENTS.

<sup>12</sup> I am indebted to the B.M. Department of Coins and Medals, Mrs. Shear, Mrs. Varoukha and P. Grierson for assistance and suggestions in attempting to place this unusual piece. Of the inscription on the reverse, only the N is certain, but there seems to be definitely only two letters in the lower line, so that IC XC/NIKA does not seem possible. More probably we have a four-letter inscription of the type on the reverse of signed issues of Romanus IV, Nicephorus III

and Alexius I. If the piece is a Byzantine imperial issue, and the Christ-type of the obverse strongly favours this, perhaps: [Κ(ό)ς] Φ(ω)ς]/Ν(ικηφόρος) Β(ασιλεύς) or Β(ασιλέα)? P. Grierson would assign it to Nicephorus Bryennius and will discuss the matter in a forthcoming issue of the *Numismatic Chronicle*. The pretender Nicephorus Melissenus, also, does not seem to be entirely excluded.

The following four pieces were all found in or near the mosaic-paved house in trench 7, though they cannot be certainly associated with that building or its successors. All are of blue-white Taygetus marble.

47. Ionic frieze and cornice block (fig. 18): ht. 0.163; preserved depth 0.265; preserved length 0.18.  
 48. Doric capital (fig. 18): ht. 0.117; breadth of *abacus* 0.28. Four *anuli*. Lower part much damaged.  
 49. Fragmentary Ionic capital (fig. 18): ht. 0.162; estimated depth of *abacus* 0.276. Rectangular dowel hole 0.025 by 0.013 by 0.022 deep in top of *abacus*. Break to right is ancient; round dowel hole for repair, 0.02 in diam., 0.032 deep, containing rust.  
 50. Ionic capital (fig. 18): ht. 0.164; breadth 0.435; depth 0.33. To fit column of 0.21 diam. Exposed parts finished with rasp.

#### (D) Inscriptions.

51. On architectural block (46, *q.v.*): ht. of letters c. 0.09.



The concavity and the roughly-tooled surface of the inscribed part of the block suggest the possibility of the erasure of an earlier inscription.

52. Slab of blue Taygetus marble inscribed on both faces. Preserved edge to left of side (a). Present top edge may be subsequent to both inscriptions. Ht. 0.145; length 0.21; thickness 0.055 to 0.065, the block being narrowest at the preserved left edge. Found in debris, apparently from a collapsed wall, in the southernmost room in trench 7.  
 (a) Mean ht. of letters 0.024 (PLATE 29).

-----  
 Ἐπιτροπῆς -----  
 Νερβίνιος -----  
 γρα(μματοῦς) βουλᾶς -----  
 Σπ[ουδοφόροι (?)] ---  
 -----

Apparently from a list of the Gerosia. Nervinius may be C. Nervinius Noetos, γέρον in the year of the patronomus Ti. Claudius Seianus (*IG* V. 1 71, Col. III, 11-13) and later ephor under Cascellius Aristoteles (*IG* V. 1 69, 70 and 71). Indeed, in the absence of any indication that Nervinius Noetos served on the Gerosia at any other time (cf. *BSA* XLIII, 235 ff.) it is just possible that this inscription may be assigned to the year of Seianus. In that

case the γραμματεὺς βουλᾶς would be Kallikrates (by inference from *IG V. 1* 69 and 71) and Epaphras might then be added to the incomplete list of γέροντες in that year (*IG V. 1* 111.). On the γρᾶ of γραμματεὺς in ligature, cf. *BSA XXIX*, 27.

(b) Ht. of letters 0.02; space between lines c. 0.012. Face more highly polished than

(a). (PLATE 29.)

-----?-----  
 τῷ δίδναι 'Α]ντιπάτρου κἀ(σεν?)  
 ----- οὐάχου  
 ----- Τε]λεσφόρου

Probably from a list of magistrates. The lettering appears later than on side (a), suggesting a date in the mid- to late second century A.D., so that we may here be dealing with the sons or descendants of men distinguished earlier in the century, viz. C. Iulius Antipatros, son of C. Iulius Lysikrates, eponymous patronomus in the reign of Hadrian (*BSA XXVII*, 237; *XXIX*, 12) and Telesphoros, son of Anthesphoros, president of the ephors in the year of Damokles, son of Damokles (*IG V. 1* 65; *BSA XXIX*, 13).

- 53 Two graffiti on pottery from the grit stratum in test-pit 5, 53 being on the base of a and black-glazed cup, possibly of Corinthian fabric, and 54 on the base of a black-glazed  
 54- Laconian mug. Second half of fifth century B.C. (?). Shown actual size. For other Spartan graffiti see *AO* 371 ff. and *BSA XXIV*, 104 ff., and 119 ff., *XXX*, 241 ff.



(E) Miscellaneous.

55. Lamp, Broneer's type XXVIII (PLATE 29): diam. of body 0.076. On discus, lion (?) attacking another creature. On reverse, palm branch in oval double-grooved frame. Hand-made unpierced handle. Hard micaceous red clay with white particles. Dull red-brown glaze (cf. *Corinth IV* 2, 115). Probably late third or early fourth century A.D.  
 56. Cake-stamp (PLATE 29): diam. 0.09; coarse bright orange micaceous clay. Cf. *AM* LIV, 132. From a twelfth century level.

R. V. NICHOLLS

*Addendum.* The two pottery fragments shown in FIG. 19, part of the rim of a mid-sixth century B.C. Laconian column-krater<sup>78</sup> and a portion of a

<sup>78</sup> Cf. *BSA XXXIV*, 149.

L.H. III stirrup vase,<sup>77</sup> were discovered in the course of the earlier investigations on the sportsground site carried out by the Greek Archaeological Service.



FIG. 19.—SPARTA: *above*: RIM OF LACONIAN COLUMN-KRATER; *below*: FRAGMENT OF L.H. III STIRRUP VASE.

They are included here by permission of Mr. Stavropoulos in view of their potential significance for the occupational history of this area. Mr. Stavropoulos reports that they were found in soil already disturbed in the levelling of the playing field.

<sup>77</sup> On Mycenaean sherds from the Spartan acropolis, see *BSA* XXVIII, 79.

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(a)



(b)

(a) ATHENS. THEATRE OF DIONYSUS. PROHEDRIA AND ROMAN ORCHESTRA SCREEN.  
(b) ERETRIA. CAVEA AND ORCHESTRA.



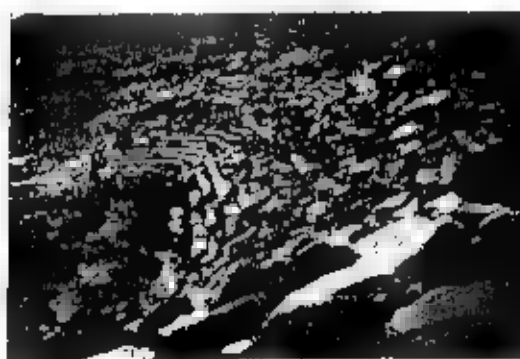
(a)



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(c)



(d)



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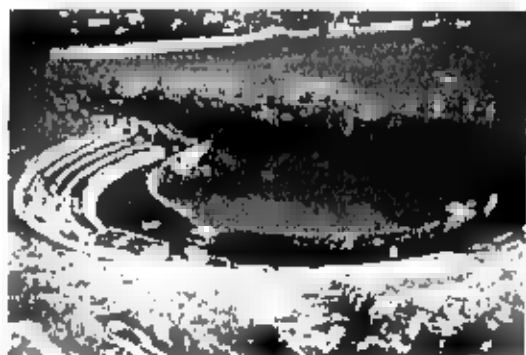
(a) RHAMNOUS. PROHEDRIA AND STELE BASES. (b) CHAIRONEIA. THEATRE AND MODERN VILLAGE. FROM THE WEST. (c) THORIKOS. ANALEMMA AND ENTRANCE 'Y'. FROM THE WEST. (d) THORIKOS. CAVEA. FROM THE EAST. (e) IKARIA. PROHEDRIA AND BASE, FROM THE EAST. (f) MYCENAE. PROHEDRIA.



(a)



(b)



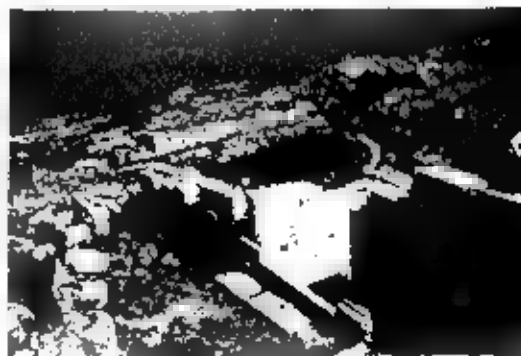
(c)



(d)



(e)



(f)

(a) LARISSA. SEATS IN THE CAVE. (b) ARGOS. 'SMALL THEATRE' AND ROCK-CUT SEMI-CIRCLE. (c) ARGOS. ORCHESTRA AND PROHEDRIA. (d) SPARTA. THE BOTTOM ROW OF THE CAVE AT THE EAST WING. (e) SIKYON. THEATRE FROM THE EAST PARODOS. (f) THERA. UPPER ENTRANCE, FROM STREET OFF MAIN THOROUGHFARE.



(a)

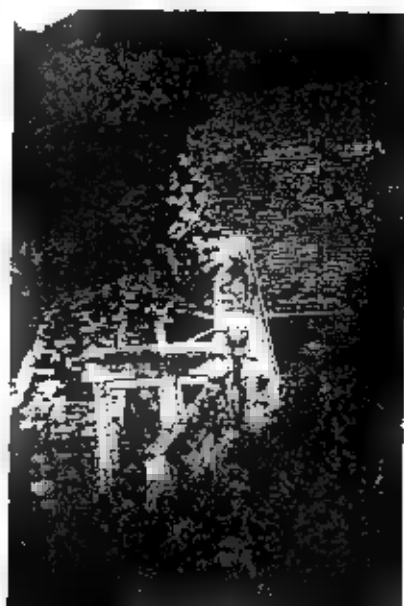


(b)

(a) EPIDAUROS. THE DIAZOMA AND THE UPPER PROHEDRIA.  
(b) DELOS. THE THEATRE FROM THE SOUTH PARODOS.



(a)



(b)



(c)



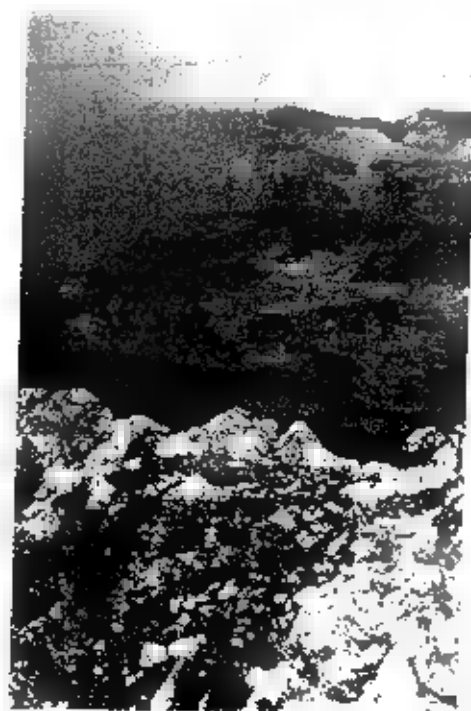
(d)

(a) DELPHI. THE CAVEA.

(b) EPIDAUROS. THE CAVEA. PIRODOS DOOR AND TOP OF WEST AVILEMMA.

(c) MANTINEIA. THE FRONT ROW AND STEPS LEADING TO THE ORCHESTRA.

(d) TIERA. THE CAVEA FROM BELOW. IN THE CENTRE IS THE THIRD STAIRWAY.



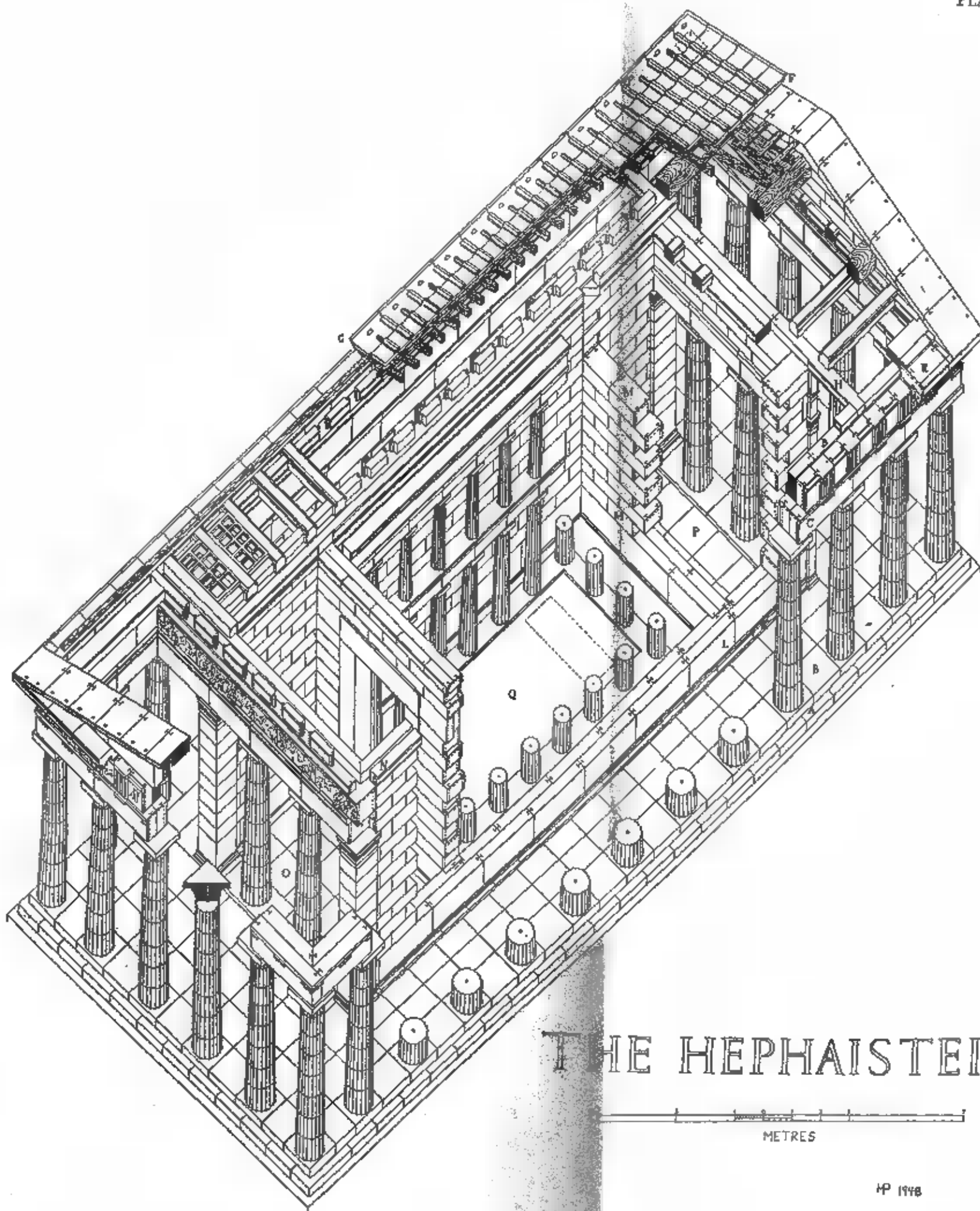
(a)



(b)

(a) SITE ON MOUNT LUTRAKI LOOKING TOWARDS THE PERACHORA, WITH STONE CHUTE  
IN FOREGROUND.

(b) *SEMI* FRAGMENT FROM MOUNT LUTRAKI



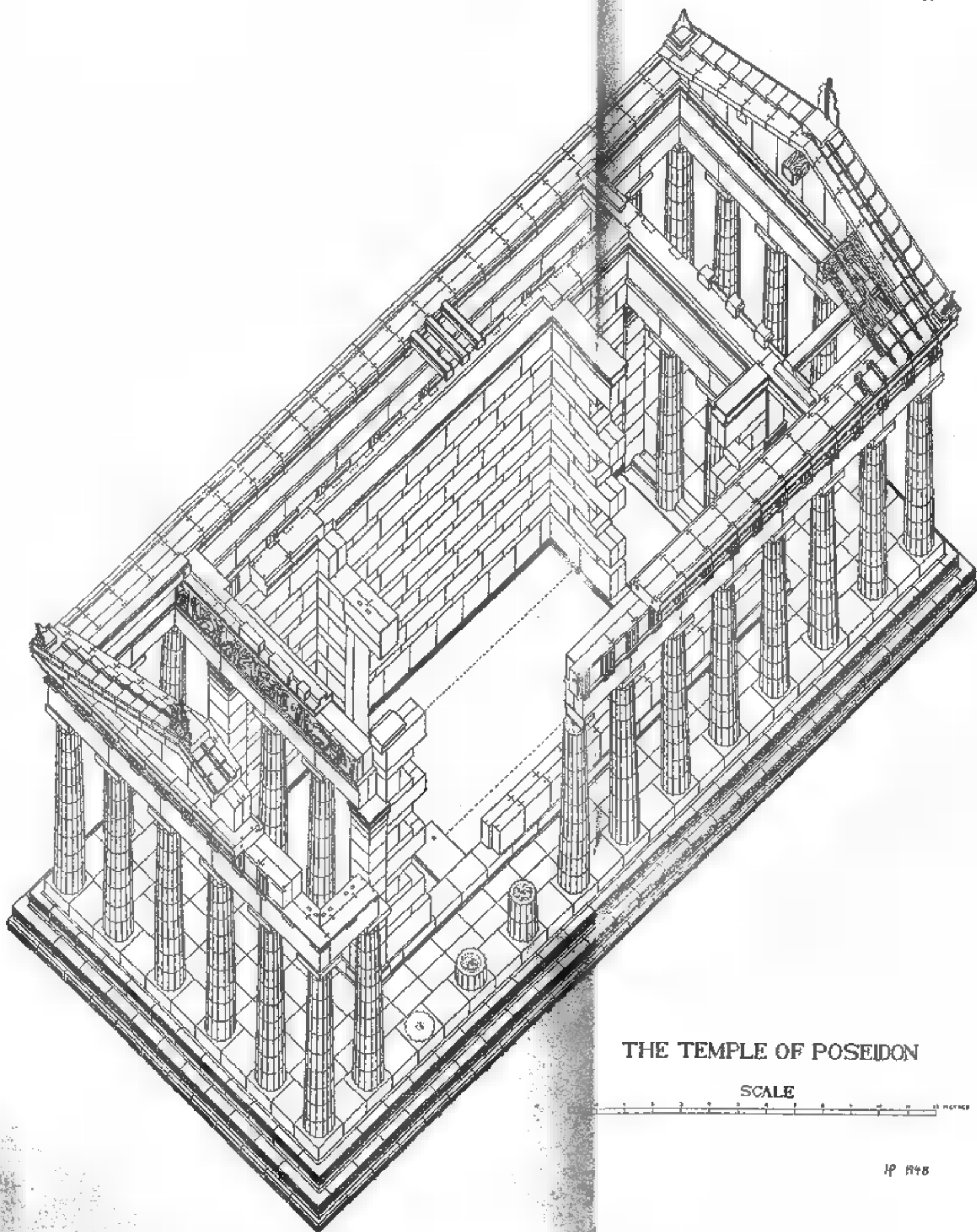
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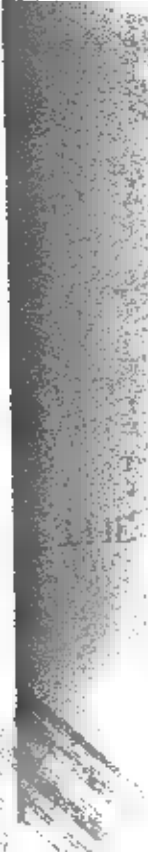


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SCALE

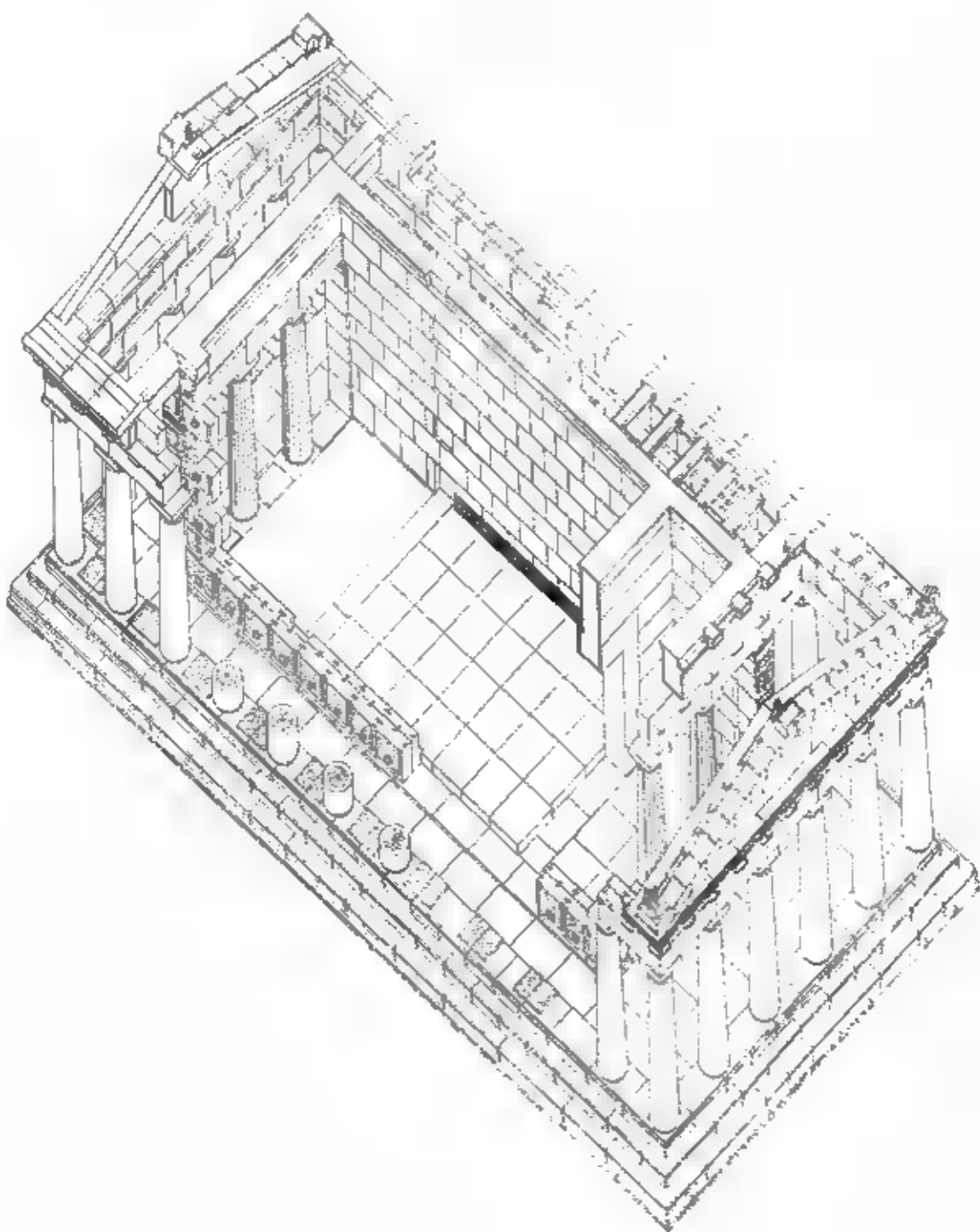


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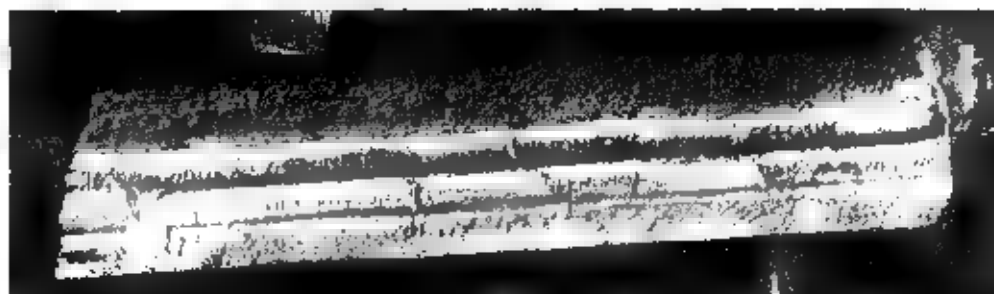


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THE TEMPLE OF NEMESIS



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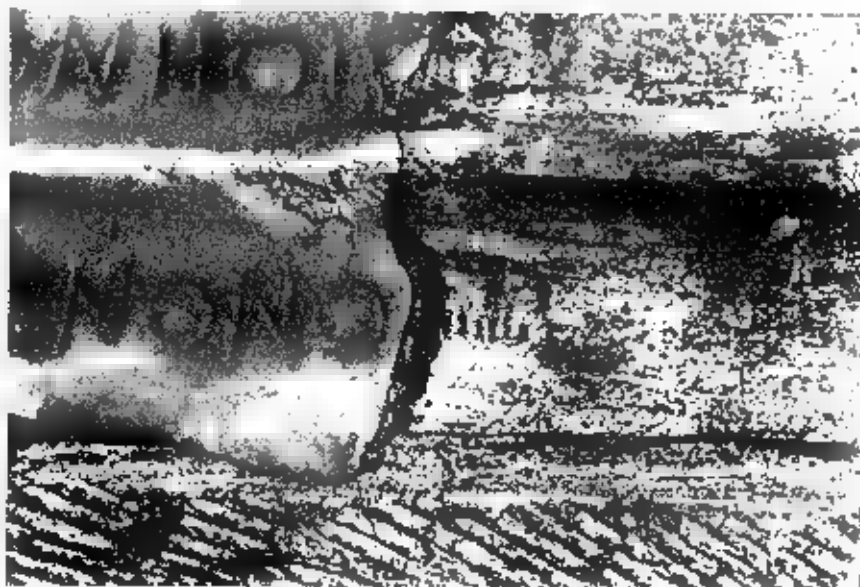


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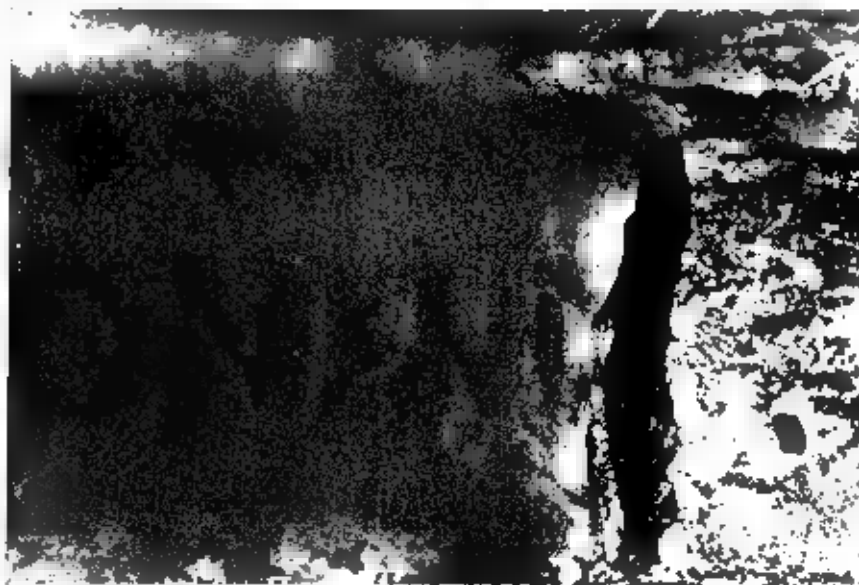


(c)

(a) IG 1<sup>a</sup>, 609. KEY TO FRAGMENTS. Cf. page 140, n. 5.  
 (b) and (c) IG 1<sup>a</sup>, 609. LEFT AND RIGHT PORTIONS.



(a)



(b)

(a) IG 1<sup>st</sup>, Gog. DETAIL OF FRAGMENT *f*. Cf. page 144.  
 (b) IG 1<sup>st</sup>, Gog. DETAIL OF FRAGMENT *e*. Cf. page 146.



A



D



B



E

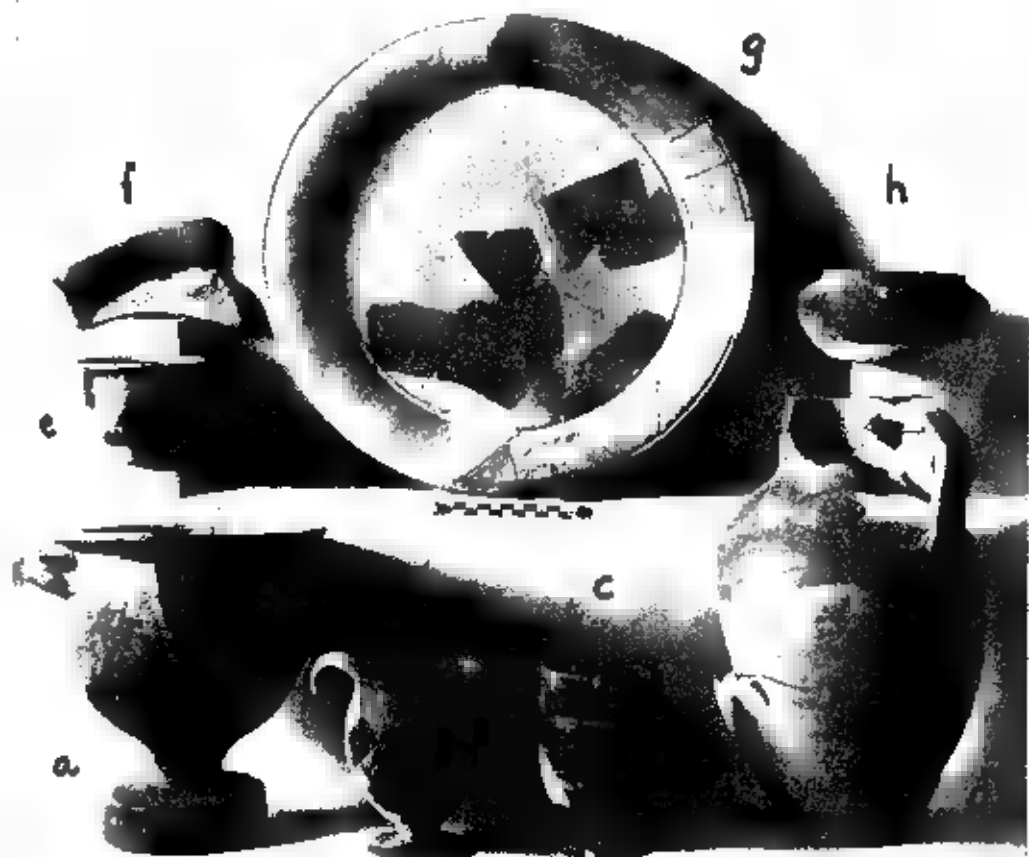


C

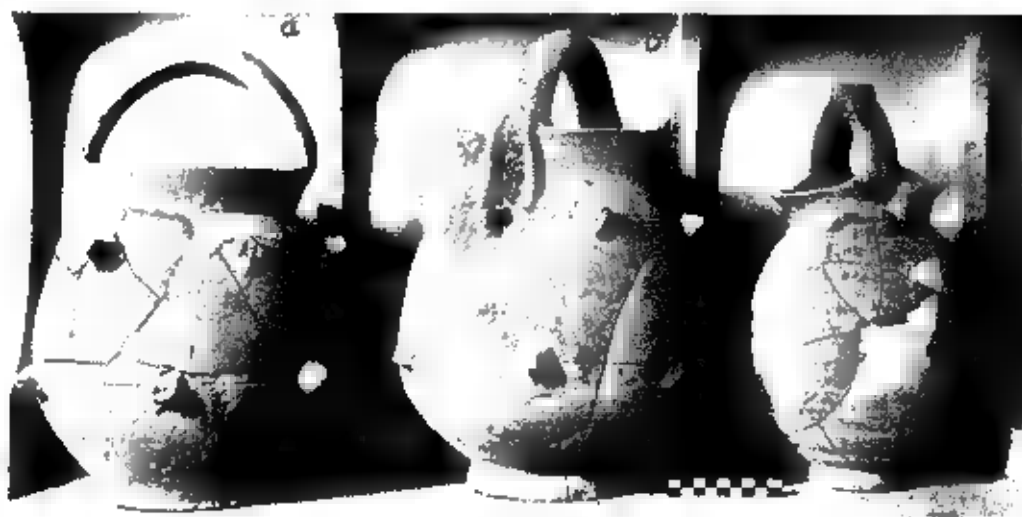


F

A KILN SITE AT KNOSSOS: POTTERY FROM THE KILN SURFACE.



A



B

A KILN SITE AT KNOSSOS: A, POTTERY FROM THE KILN SURFACE. B, BUCKETS FROM THE CISTERN.





A



B



D



C



F



E

A KILN SITE AT KNOSSOS; POTTERY FROM THE CISTERN.



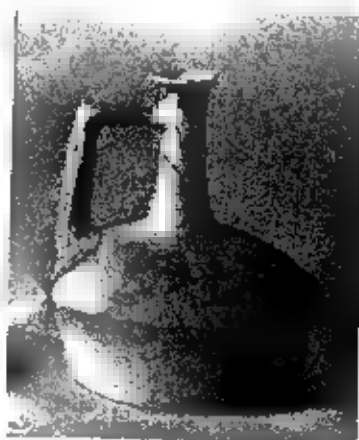
A



C



B

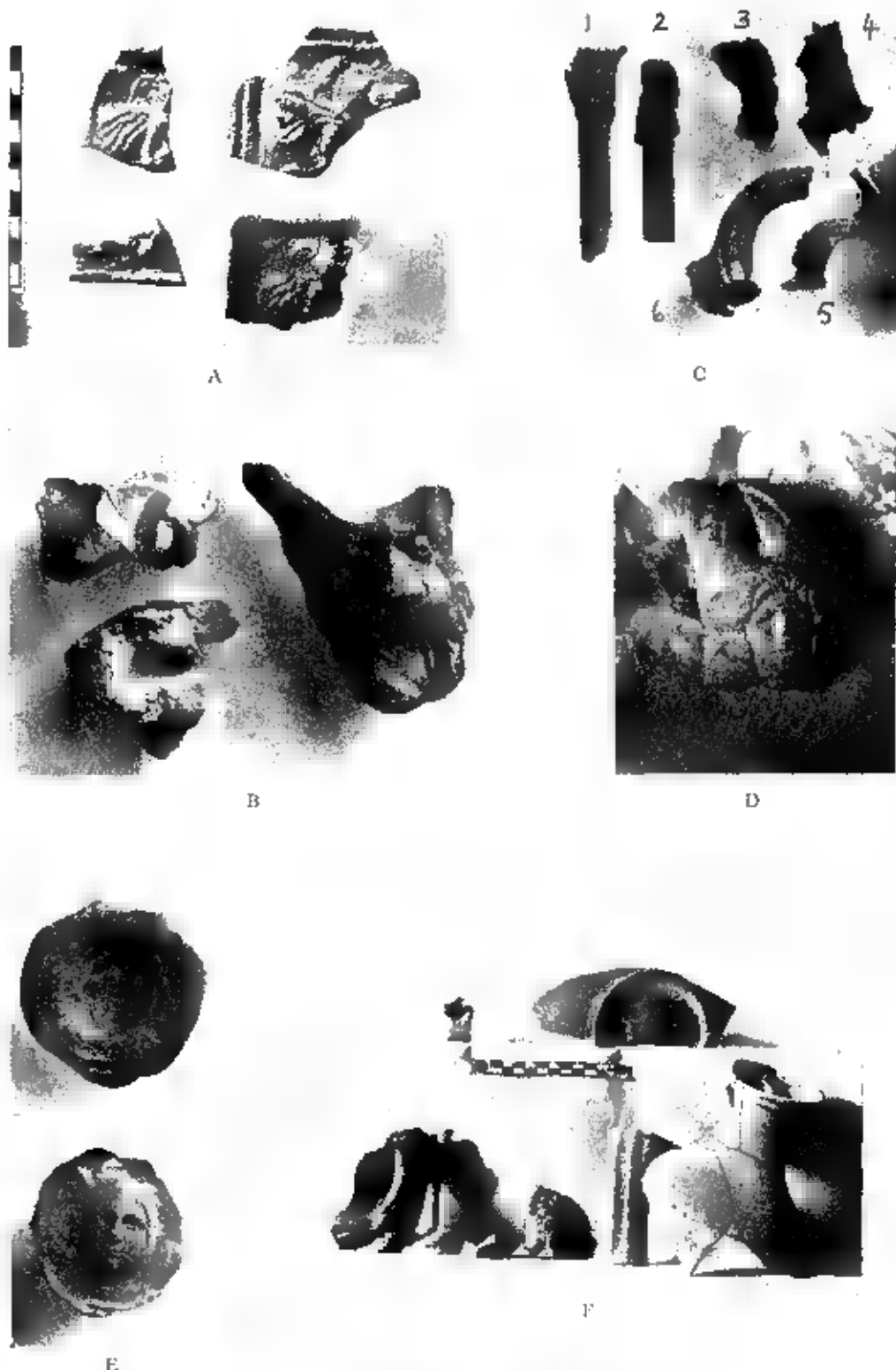


D

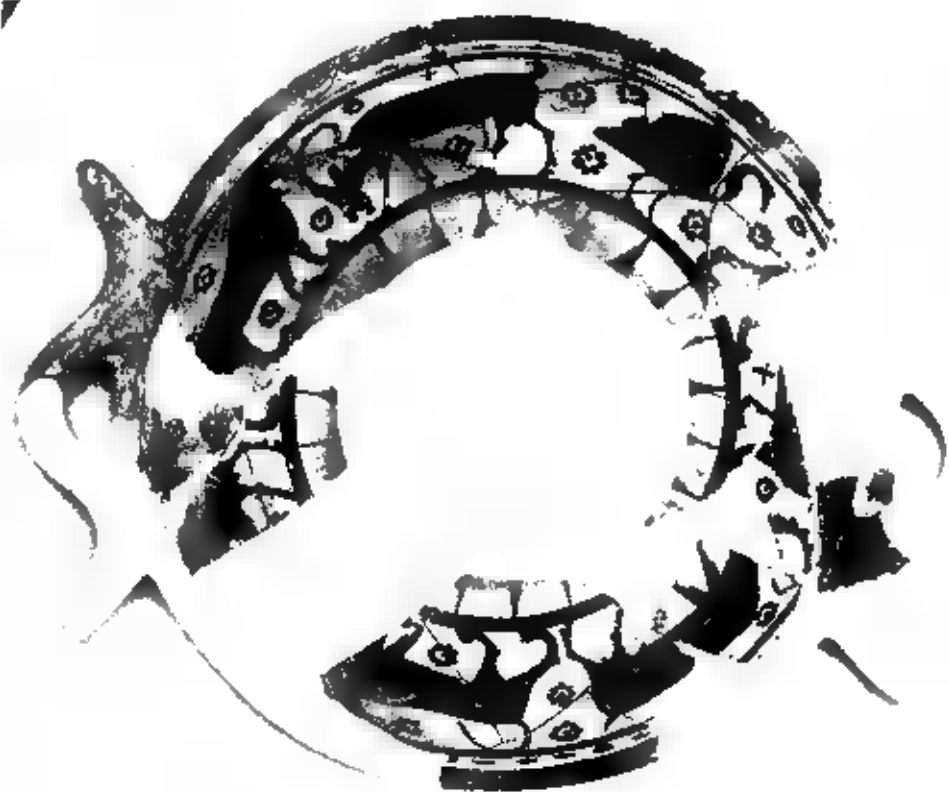


E

A KILN SITE AT KNOSSOS: POTTERY FROM THE CISTERN.



A KILN SITE AT KNOSSOS: A-E, FINDS FROM THE CISTERN. F, WASTERS FOUND NEAR THE SITE.



(a)

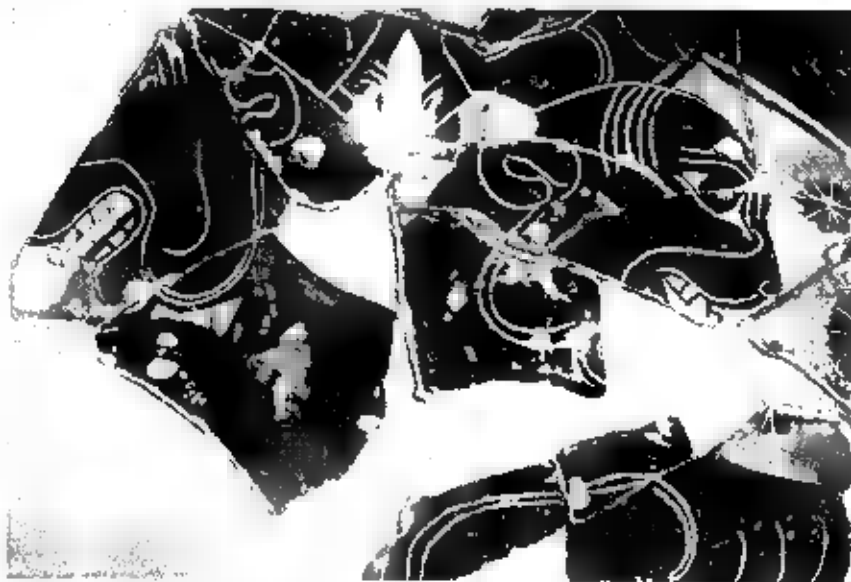


(b)

(a) and (b) ATTIC BOWL, FORMERLY IN THE POSSESSION OF MR. H. G. G. PAYNE.



(a)



(b)

(a) and (b) AMPHORA FROM VARI, ATHENS 16393.

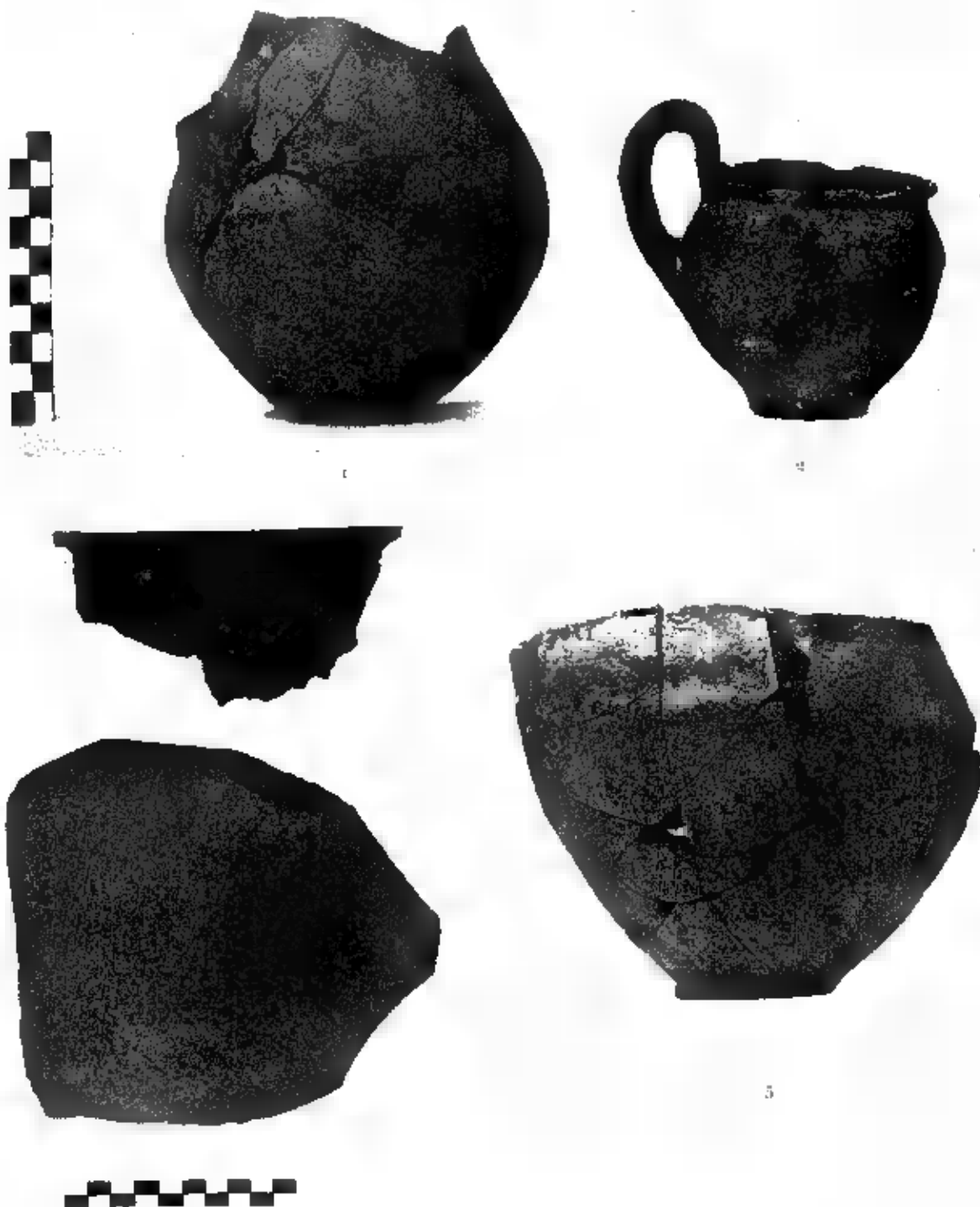


1a

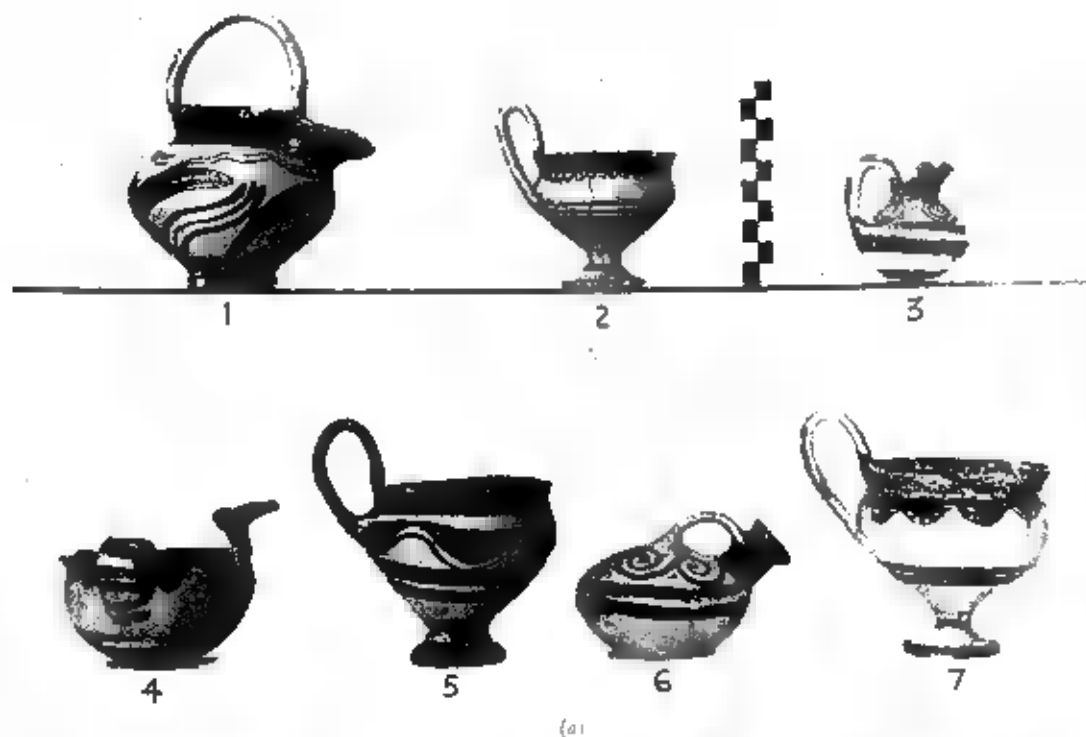


b.

MYCENAE, PREHISTORIC GEMETERY NEAR THE LION GATE.  
 a. GRAVES V, VII WITH COVER-SLAB IN POSITION, AND III.  
 b. GRAVES XI (CIST-GRAVE), XV, XIII (CIST-GRAVE; ONE SLAB REMAINING), AND XIV  
 SKELETON IN SITU.

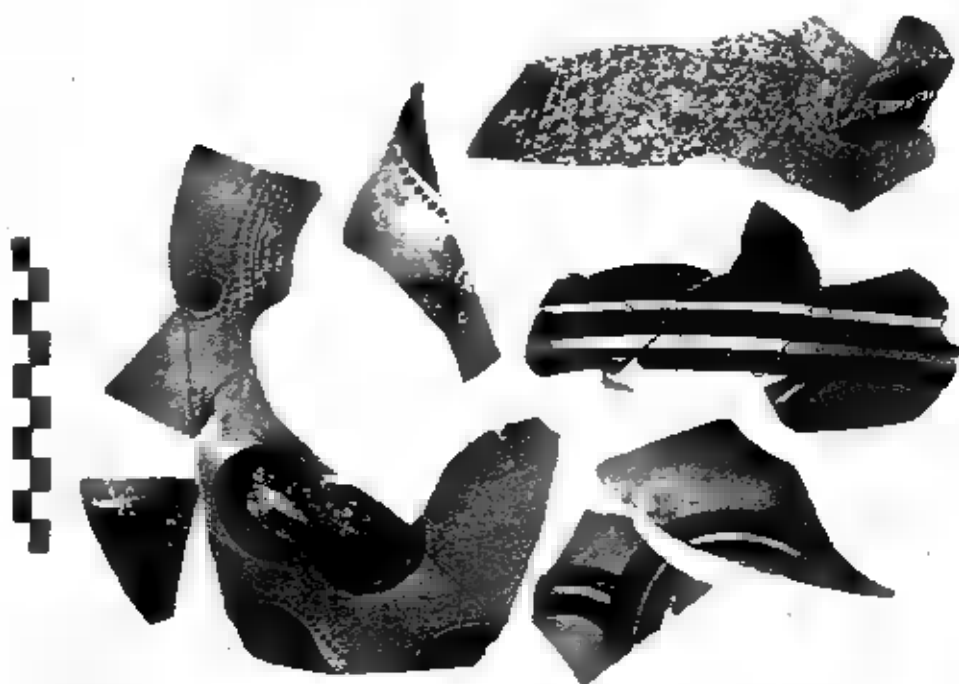


3  
+  
M.H. POTTERY FROM THE PREHISTORIC CEMETERY AT MYCENAE.

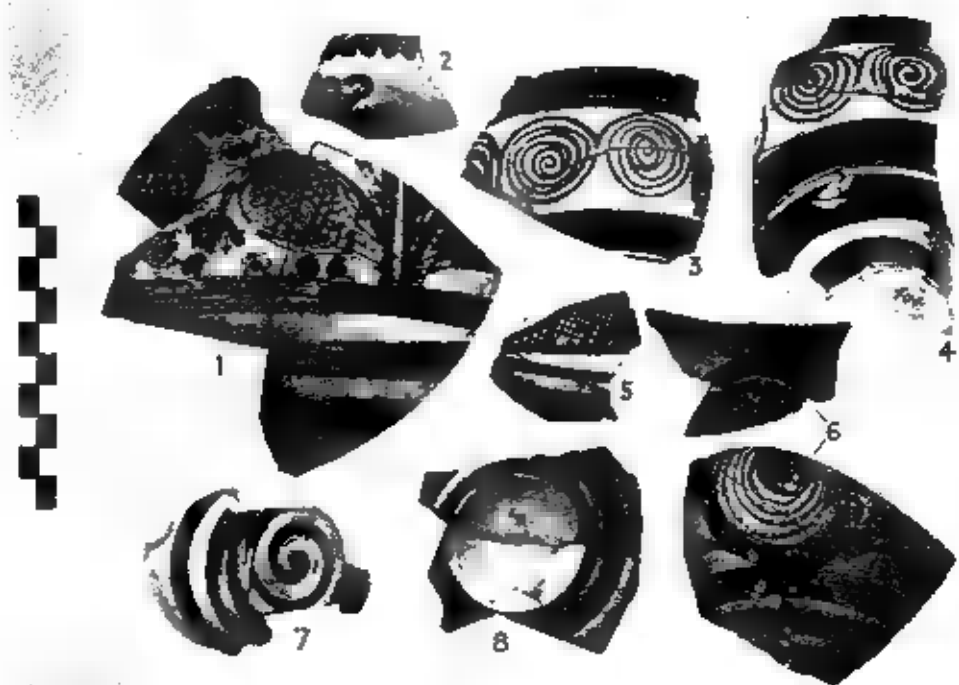


(a) L.I.L. I POTTERY FROM THE PREHISTORIC CEMETERY, MYCENAE.  
(b) THE SAME POTS *IN SITU* IN GRAVE III.

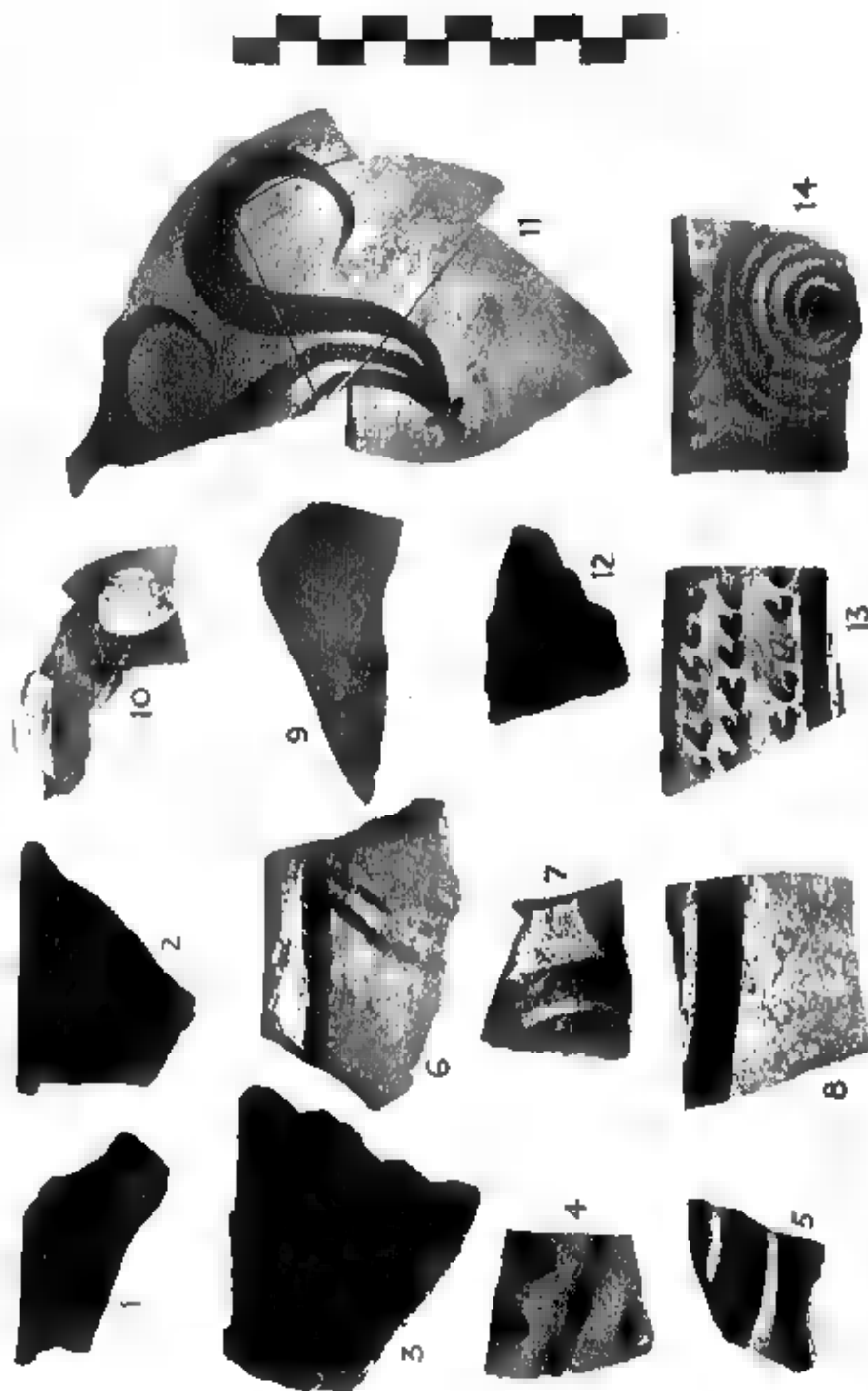




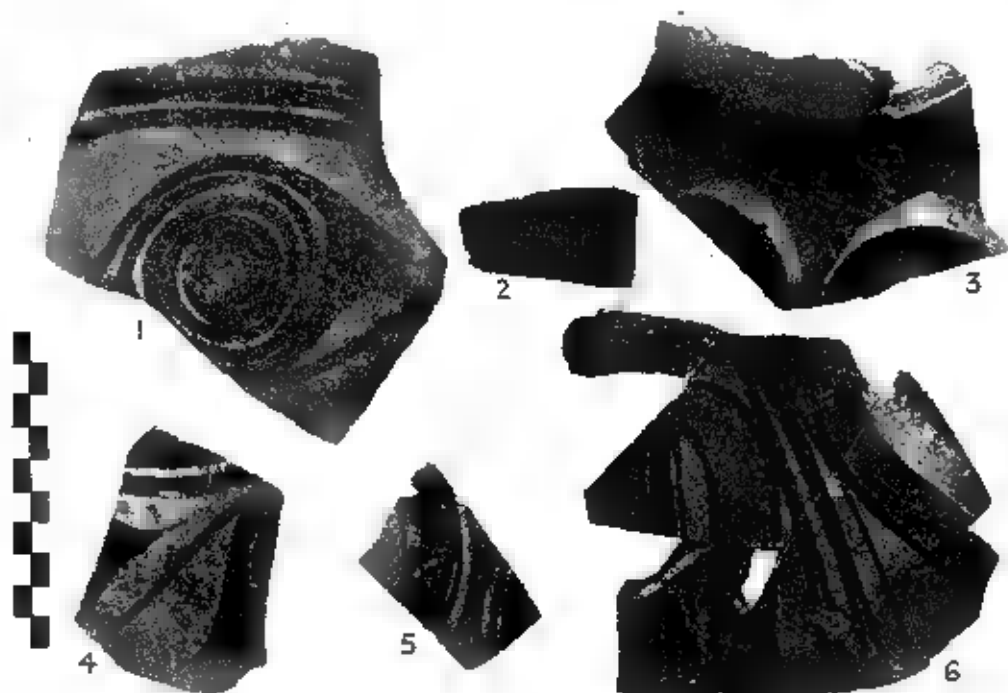
(a)



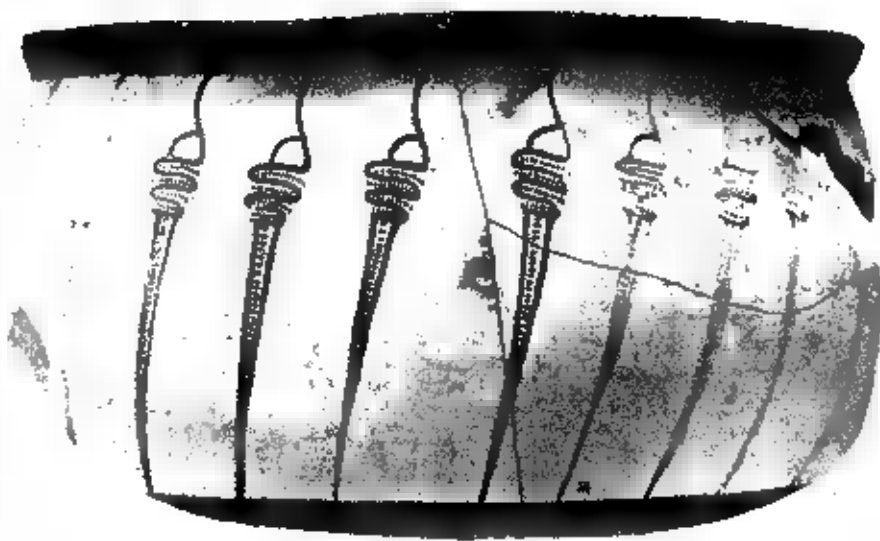
(b)



N.H. AND L.H. POTTERY FRAGMENTS FROM THE PREHISTORIC CEMETERY AREA AT MYCENAE.

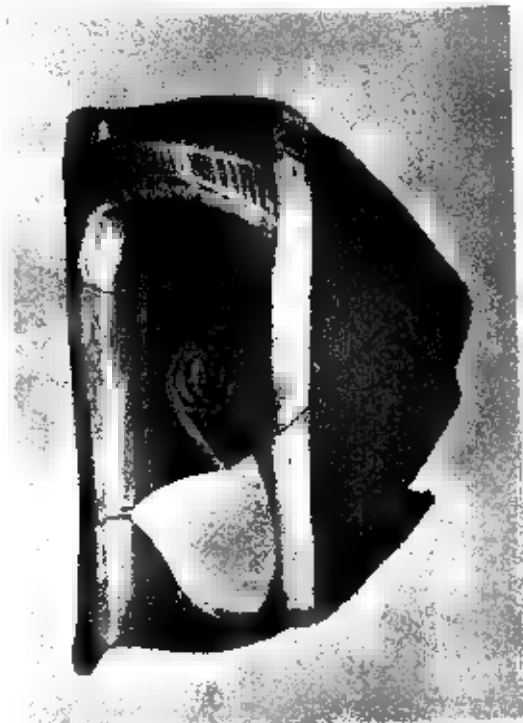


(a)



(b)

- (a) POLYCHROME MATT-PAINTED M.H. SHERDS FROM MYCENAE: 1-5 FROM EARLIER EXCAVATIONS; 6 FROM NEAR GRAVE XIV, EXCAVATED 1939.  
 (b) FRAGMENT OF L.H. III B KRATER FROM MYCENAE, FOUND IN FRONT OF TERRACE WALL WEST OF SCHLIEMANN'S DUMP.



POTTERY FROM THE PREHISTORIC CEMETERY AREA AT MYCENAE.  
1. L.H. 11 GCP; 2. L.H. 11B PIRIFORM JAR; 3. L.H. 11B PIRIFORM JAR.



1



2



3

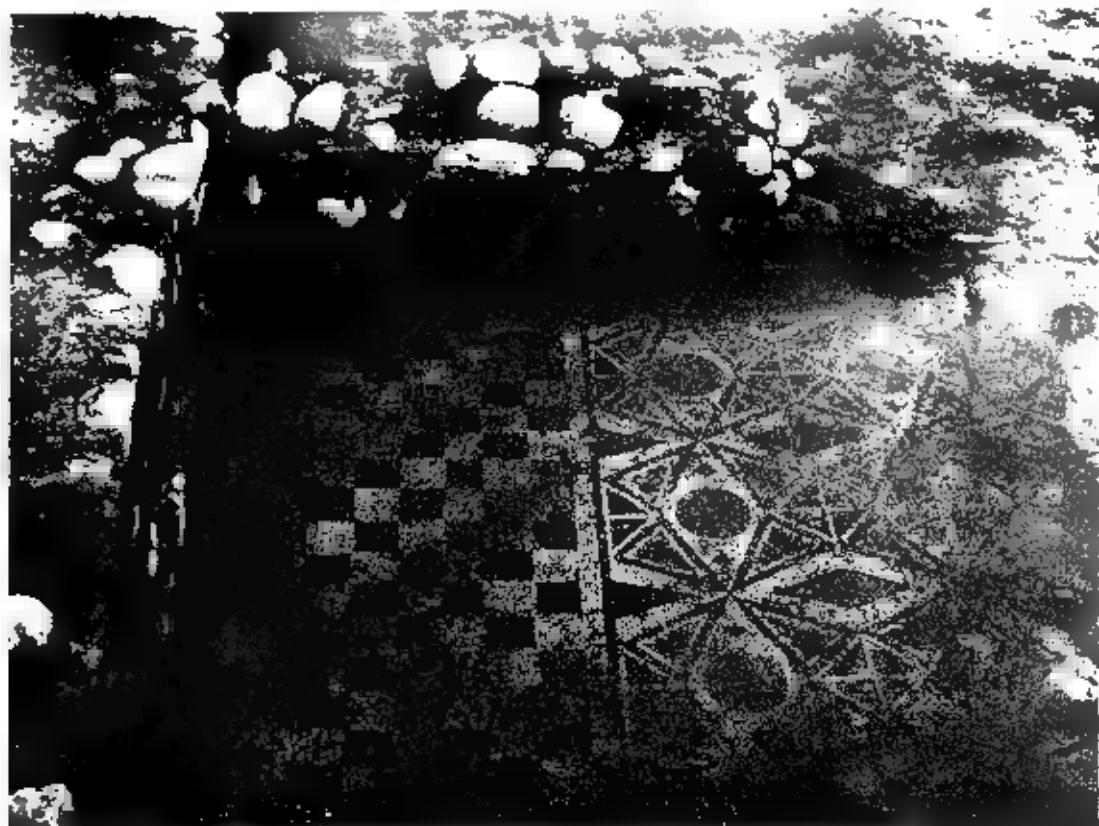


4

1. APPROACH TO KALÝVIA SOKHÁS FROM EAST. 2. KALÝVIA SOKHÁS FROM WEST.  
3. AMPHITHALITIC DEDICATION. 4. FRAGMENT OF CULT INSCRIPTION.



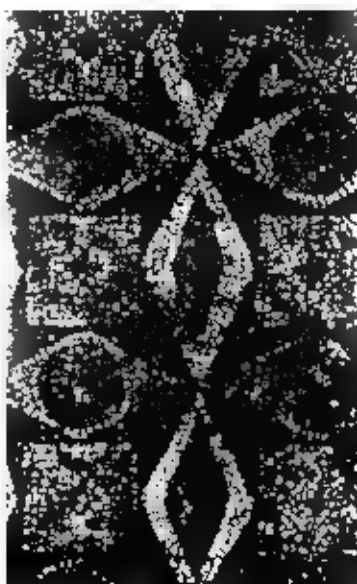
KALÝVIA SOKHÁS: SELECTION OF VASES FROM THE ELEUSINION.



(a) ROMAN HOUSE: REPAIRED MOSAIC IN WEST ROOM.



(b)

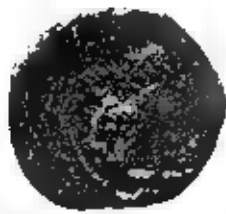
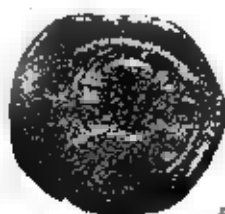
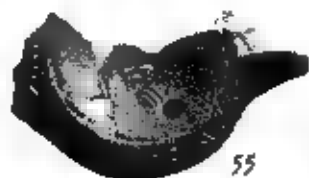


(c)

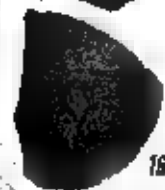
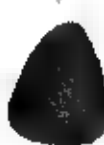


(d)

SPARTA, SPORTSGROUND: DETAILS OF MOSAICS, (b) IN WEST ROOM, (c) AND (d), IN SOUTH ROOM.



43



18



52(a)

52(b)

SPARTA, SPORTSGROUND: MISCELLANEOUS FINDS.









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